

No. 2,064. Vol. XCI. FREEZERS 250000

AUGUST 16, 1919

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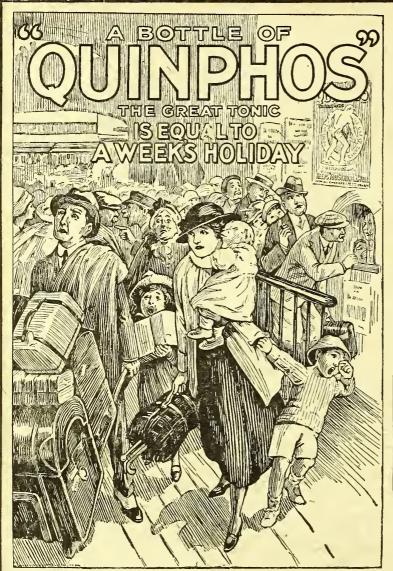
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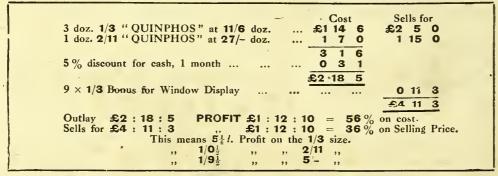
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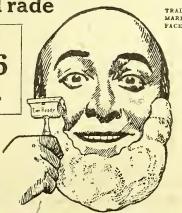
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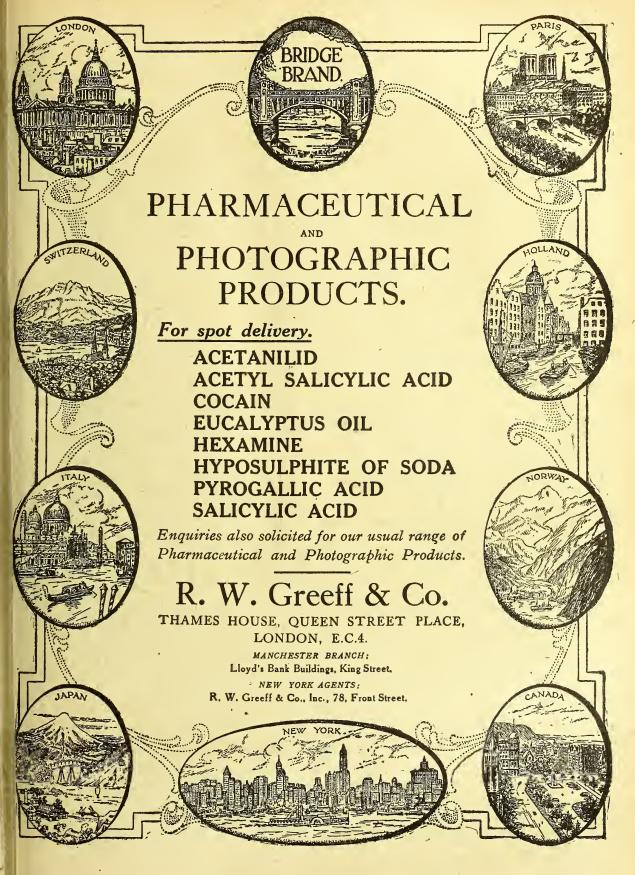
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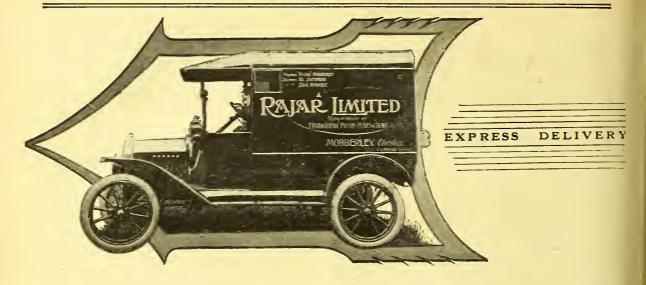
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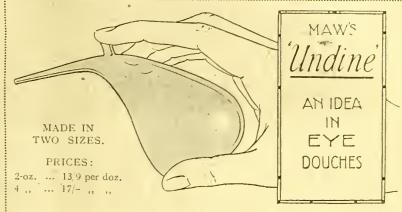
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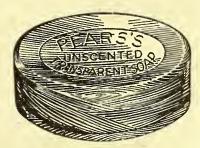


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Small "SANITAS FLUID" (late 10d. bottles) increased to Retail 1/-Trade rate 9/6 per dozen

Large bottles) increased to Retail 1/6 1/3 Trade rate 14/6 per dozen

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(N.B.—All goods despatched by us up to and including August 25th will be invoiced at current rates, but all unexecuted orders in hand on that date will be regarded as placed or confirmed at the new prices IRRESPECTIVE OF DATE, unless specifically cancelled before August 30th.)

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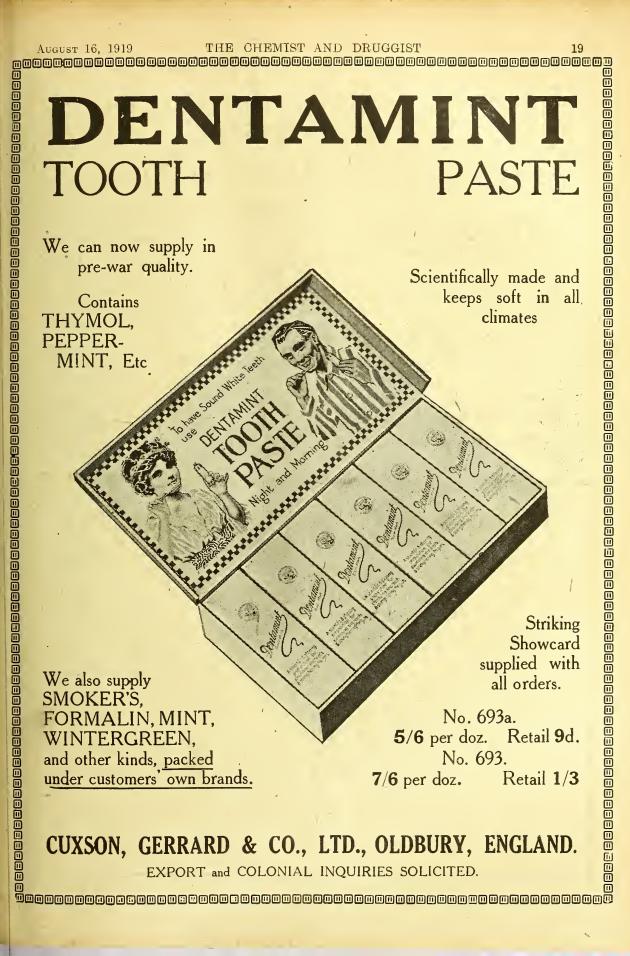
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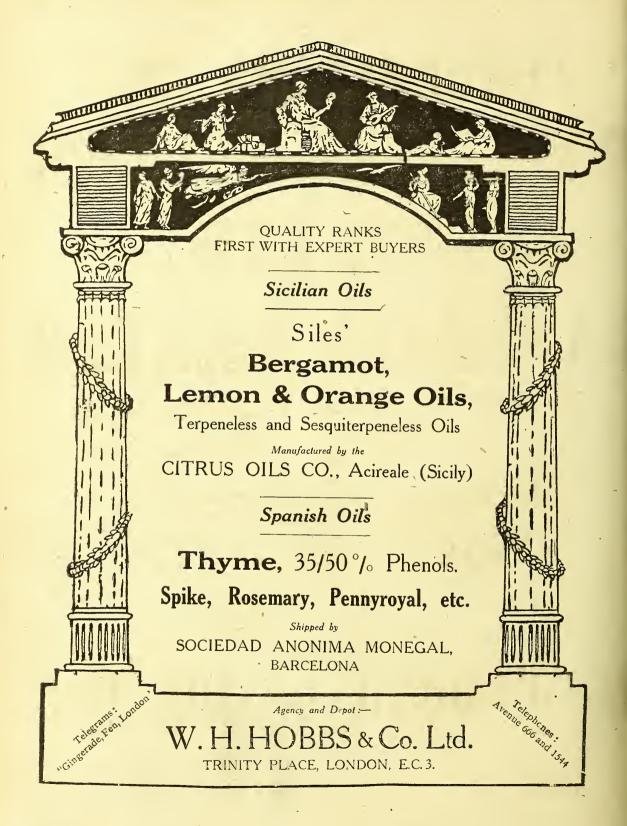
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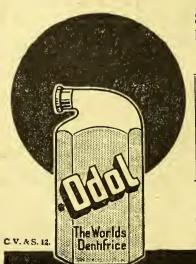
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"Jackel's Cream" fixes the hair in any desired position; is unexcelled as a dressing and does not soil the headware. It removes Scurf and Dandruff, keeps the scalp healthy, and promotes the natural growth of the hair while maintaining its softness and brilliancy.

ऋजार जार जार जार जार जार Prices for Wholesale and Export
Houses on application.

Jackel et Cie (of Paris) I td. Sauchiehall Street GLASGOW



CRYSTALLISED 1/6 CREAM

Trade Mark attached to each bottle.

OVER 100 % PROFIT ENSURED & PROTECTED (P.A.T.A.) for sellers of

One solution, nine shades.

A first-class article with an excellent demand, created entirely on its own merits, and carrying a first-class profit.

Size.	Min	in'un ret	ail.	Minimum wholesale.			
1/-	• • •	1/-		7/6			
1/6		1/6		9/- {	per doz. less 5%		
2/6 3/6		2/6	•••	15/- {	discount.		
3/6		3/6		21/-)	arboo a bo		

SPECIAL BONUS

Buyers of 3 doz, bottles receive 3 bottles gratis (may be assorted and any size). 6 doz. do. Do. 8 bottles gratis. 18 bottles gratis. 12 doz. do Equivalent in the case of the size in most general demand, viz. 1/6 size, to 4/6, 12/- and 27/- respectively.

Sole Proprietors-

C. R. HARKER, STAGG & MORGAN, DEVON WHARF,

Emmott Street, Mile End, London, E.1.

NEW PROPRIETARY

BY

DEARBORN, LTD.

37 Gray's Inn Road, W.C. 1

Haraposa NUT OIL

A Liquid Shampoo.

Trade - - - 22/6 per dozen

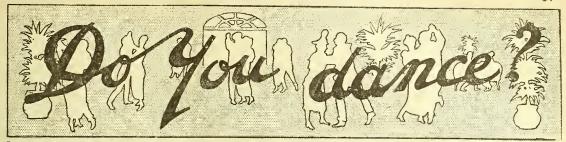
P A T A 2/6 per dozen

P.A.T.A. - 2/6 ,, package

SALES GUARANTEED BY THE MANUFACTURERS. NO RISK.

Order Direct or through your Wholesaler.

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A Medical opinion of DULC-O-D).

DULC-O.D.

"I have tried Dulc-o-do in asses of excessive perspiration of feet, axilla, etc., and it has succeeded after Formalin, Belladonna, etc., have signally failed. I myself have suffered from excessive perspiration in the axilla, due to Malaria, which I got in Iudia several years ago. I have also tried it, and it has completely relieved the condition. It seems to me a most excellent preparation "-Dr. H—M.B. Ch. B.

This design is appearing in the ladies' papers, and is our coloured Showcard reduced. There is a big demand for this harmless Toilet Water which corrects perspiration troubles, and makes dress shields unnecessary. Approved by the medical profession. Send 20/- for a sample dozen and watch the rapid sales.

Bonus of 3 with 3 dozen lots.

Minimum Retail Price 2/6

SCOTT'S CHEMICAL CO., LTD., 47 HUDDLESTONE ROAD, WILLESDEN GREEN, N.W.2



The Harmless
Toilet Water
for ———
EXCESSIVE
PERSPIRATION



SALES BEAT ALL RECORDS.

Indian Perfume Brick

KEEPS AWAY MOTH. LASTING & FRAGRANT.

PERFUME BRICK

FOR LINEN CUPBOARD AND WARDROBE.

Retail Price, 6d.

Of the Makers:

ALBERT WILLIS & ARTHUR, Ltd.
6 Mortimer St., London, W.

AND ALL WHOLESALERS.

MOUSLEY'S 'BEAVERPUFF'

Patent Nos. 4931 and 4932.

The Ladies' Natty Friend.



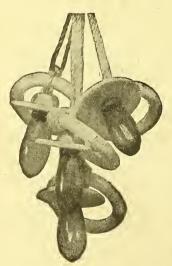
Just out. Demand great. Delightfully soft in use. Superior to artificial Puffs. Write for Prices and Terms

F. A. MOUSLEY

(MAKER)

Priest Bridge, Mortlake, London, S.W. 14.





The Pacifier with the transparent solid elastic teat.
Guaranteed pure jelly-filled.

Nothing but Profit

"EVERSAFE"

the

Champion of Baby Pacifiers

SELLS RAPIDLY, & INVARIABLY BRINGS REPEATS — ON MERITS

To prove it we offer to send one trial sample order (not repeatable) of three dozen, viz.:

1 dozen No. 2, $4\frac{1}{2}$ d. line, 2/9 doz.

1 ,, ,, 2c, 6d. ,, 3/2 ,

1 ,, ,, $3, 7\frac{1}{2}$ d. ,, 4/8 ,,

Carriage paid anywhere within the United Kingdom for 10/6, or to any part of the world for 11/6.

Cash with order, and will re-credit unreservedly and return cash on receipt, plus return expenses, any not satisfactory within three months.

Single samples free, with pleasure, on request.

May be had on display cards of one dozen, or on miniature cards showing three. Cards printed in all modern languages, and those used for export bear no sales price.

F. SCHUTZE & CO., LTD.

Manufacturers of Druggists' Sundries

18 MARKET ROAD, LONDON, N.7

Lists of full manufactures on application.

A few reasons

why the pharmacist should stock and push Parke, Davis & Co. Specialities.

- 1. The profit is a handsome one, well above the average for similar specialities.
- 2. The profit is protected by the P.A.T.A. and has been for years.
- 3. They are unsurpassed for quality and style.
- 4. They sell on their merits, and bring repeat orders.
- 5. They are products of a pharmaceutical firm of the highest repute.
- 6. They are made in England at Hounslow, Middlesex.

The following examples are taken at random:

	M.R.P.		M.W.P. per doz.		Profit on outlay
Bath Crystals	3/-		24/-	• • •	50%
Euthymol Shaving Stick	1/-		8/1		48%
Euthymol Tooth Paste	1/3		10/2	• • •	47%
Euthymol Tooth Powder	9d.	• • •	6/-		50 %
(Small)	1/2		0/5		E 00/
Germicidal Soap	1/3	• • •	9/7	•••	56%

An up-to-date list of these profitable preparations will be posted on request. It will show you that the above are in no way exceptional.

PARKE, DAVIS & Co.,

50-54, BEAK STREET, LONDON, W. 1.

Laboratories ::

Hounslow, Middlesex.



Whitecross Baby Powder

in smartly decorated tins, with sprinkler and dome top. P.A.T.A. 101d.; 6/- per doz.



Peach Bloom Face Powder

in various tints. P.A.T.A. 7¹/₂d.: 3/6 per doz.

Whitecross Tooth Powder,

being a first-class article, packed in smartly decorated tins, two sizes, 3/6 and 5/3 per dozen.



The Whitecross Baby Powder and Tooth Powder have both obtained the Certificate of Merit of the Institute of Hygiene. Moreover, all the above being British goods throughout should be supported in preference to foreign make.

Menthol and Menthol & Eucalyptus

Snuff, in special decorated tins. On the P.A.T.A. at 4½d.; 2/9 per dozen.

Tooth Paste in collapsible tubes.

All varieties, 5/- and 6/9 per dozen; also a special new line "Antiseptic," each in carton, 5/3 per dozen.

Lanoline, Oatmeal Cream, Witch Hazel, Antiseptic Honey Jelly, etc., in tubes, 5/- and 6/9 per dozen.

Bay Rhum, Bay Rhum & Cantharides, Brilliantine, Cold Cream, Eau de Quinine, and dozens of other lines in Price List, which will be sent free on application.

Decorated Tins and Plain in variety, all sizes, from 2 dr. upwards. Whitecross Ointment Tins, Vaseline, Fuller's Earth, Violet Powder, Tooth Powder, etc., etc.

Ready Again.—Ointment Tins with buyer's name round edge, and plain centre for labels. Write for particulars.

Special discounts to large buyers.

The CHEMISTS' MANUFACTURING Co. Ltd. with which is incorpo a ed

SHIRLEY BROS.

Whitecross Works, Rockingham Street, S.E. 1

AND DRUGGIST

AUGUST 16, 1919

Delphinus/lefo.co

**Offers an opportunity to every Chemist and Druggist of supplying their customers with genuine lines attractively packed, and of making large profits for themselves (nearly 140%).

To introduce our lines we are offering (for a limited time only) £2-7-6 for £1, as follows:—

3 doz. Delphinus Nail Polish (6d. size) 18
2 ,, , Cloth Cleaner (4½d. ,,) 9/
2 , , Styptic Pencils (6d. ,,) 12/
Shaving Block (8½d. ,,) 8 6

£2-7-6

The above will be supplied carriage and package free to every reader of the "C. & D." for the price of £1, monthly account, or less 3¼% for prompt cash.

This offer is worth consideration.

This offer is worth consideration.

Special quotations to shippers. large buyers, &c., &c.

Export to All Countries.

Edward Street, Brighton, Sussex, England.

The BRITISH PUBLIC want BRITISH MANUFACTURES.



Registered Trade Mark

Supplied complete with Free Vaporiser for the Treatment of

WHOOPING COUGH ASTHMA WHOO CATARRH COLDS ING COUGH MEASLES BRONCHO-PNEUMONIA SCARLET FEVER BRONCHITIS

And as a FUMIGANT for all INFECTIOUS DISEASES.

2 oz , $1/4\frac{1}{2}$ 4 oz., 2/3.

Most Remunerative Terms to the Trade.

Stocked by all Wholesalers.

THE COAL BY-PRODUCTS COMPANY, Holborn House, High Holborn, London, W.C. 1.
Teledrams "Cobyproco Westcent, London." Phone: Holborn 98

Phone: Holborn 983

PAPIER POUDRE

AND "POPPŒA" PREPARATIONS.



"I FHCARESOR"

Papier Poudre

BRITISH MADE GOODS

Our Sunburn Tint

For Landworkers and Seaside Visitors.

Booklets - - - 8d. & 1/4 5/- & 10/- per doz. net.

Beware of Spurious Imitations.



PAPIER POUDRE, LTD., 20 Baker St., Portman Sq., London, W. and in Paris,

NOTE OUR TRADE MARKS, AS ABOVE.

NEW PAPIER POUDRE PRICES.

WHITE, ROSE, or RACHEL Tints, 4d., 6d., 8d., and 1/4 size Booklets at 2/8, 3/9, 5/-, and 10/- per dozen net respectively.

SUNBURN TINT, 8d. and 1/4 sizes only, 5/- and 10/- per dozen net.

REFILLS to MIRROR CASES IN WHITE OF RACHEL 1/4 SHAVING PADS, FOR USE AFTER SHAVING (unscented, white only)

2/8 per doz. net.

THE ALL-BRITISH "POPPŒA" PREPARATIONS.



NEW PRICES.

ROUGE is most popular. It is put up in most convenient form, and is Nature's Understudy.

IN PADS, 8d. each. ·5/= per doz. net.

IN MIRROR CASES, 1/4 each, 10 - per doz. net. REFILLS, 6d. each, at 3/9 per doz. net.

- "POPPŒA" MASSOLINE SKIN FOOD, in Jars, 1/2, 2/6 & 3/6 each; 9/6, 24/ & 28/- doz. net respectively
- "POPPŒA" CIRCASSIAN CREAM , = 1/2, 2/6 & 3/6 , 9/6, 24/- & 28/- ,
- "POPPŒA" CREME POUDRÉ, in Bottles, 1/2 & 3/6 each; 9/6 & 28/- doz. net respectively.

PAPIER POUDRÉ, Ltd., 20 BAKER STREET, LONDON, W.1.

密密密语语语语语语语语语语语语语语语语语语语语语语语语语语语语语

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"SOFTO" Tablets

for Chapped Hands and Tender Feet.



The Line that SELLS!

Retail Price - 2d. Wholesale 12/- per gross.

"Softo" Shampoo Powders Retail Price 2d. (7 for 1/-).

Wholesale 9/6 per gross.

"SOFTO" FACE POWDER

Three tints-White, Pink and Cream.

Retail 6 d.

Wholesale: I dozen, 4/6; 3 dozen, 12/I gross (with 4 dozen bonus) 50/Net. Carriage Paid.

SOFTO MANUFACTURING CO.

33 Edgware Road, London, W. 2.

BE SURE AND ADD

La-Rola Rose Bloom

TO YOUR STOCK AT ONCE.

as it is being largely advertised in the "Daily Mail," "Mirror," "Sketch," etc.

Do not lose the business through being out of stock.

It is the most natural tint on the market, and is selling well wherever introduced.

Lait La-Rola & Glycerine & Cucumber

All these articles are protected at FACE VALUE-Write for Display Terms and save 10%.

M. BEETHAM & SON, Cheltenham.

POUDRE MALACEINE

MANUFACTURED BY

PARFUMERIE MONPELAS,
PARIS.



No. 67, Small ... 25/- doz. ,, 68, Large ... 35/- doz.

An extensive Advertising Campaign in all the principal Society Journals is now proceeding.

Write for SPECIAL TERMS and particulars of other MALACEINE PRODUCTS to the Sole Wholesale Agents for Great Britain and Ireland:

WILLIAM TOOGOOD, LTD.

77 Southwark Street, LONDON, S.E.1.

THOLONG.

Every week sees our efficiency increased. Every day we are more capable of dealing with demands for

COMPRESSED TABLETS, EMULSIONS, OINTMENTS, TOILET CREAMS, PACKED TOILET PREPARATIONS AND REMEDIES, TOOTH POWDERS AND PASTES, TOILET POWDERS.

Those demands increase in volume as rapidly as we progress—still we keep ahead, and promptitude is not the least of our virtues.

We are prepared to pack all the above under customer's own labels, or, if they wish it, prepare from their own formulæ.

May we have a line from you?

H. O. LLOYD,

The Holoyd Laboratories, Green Lane, Small Heath, BIRMINGHAM.

Lordon Depot: 3 Finsbury Square, E. C. 2





NOW
ADVERTISED
ALL OVER
GT. BRITAIN
AND IRELAND

ORDER A SUPPLY TO-DAY

AND BE PREPARED FOR THE EXTRA DEMAND DURING THE SUMMER WEATHER

G. E. FULFORD, LTD., LEEDS

IRISH Messrs. T. McMullan & Co., Victoria St., BELFAST AGENTS Messrs. May, Roberts & Co., Ltd., Westmorland Street, DUBLIN

Always in demand

Write for Lists
Price Lists
Showcards & Literature.
Fiee on request

Lavona Hair Tonic

This is an attractive line for counter or window display. It sells readily and yields the chemist a protected profit of ninepence on every bottle sold.

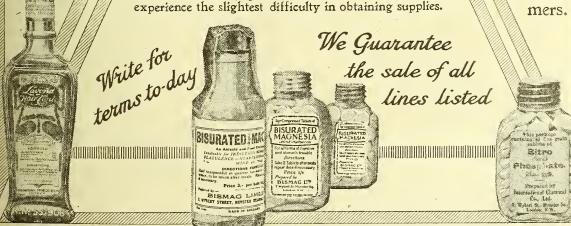
all the numerous proprietaries offered for the relief and cure of digestive and stomach troubles none enjoys greater popularity or commands a bigger or more constant sale than

BISURATED Magnesia

We are sole distributors of this excellent product, and we are able to guarantee prompt delivery of both Powder and Tablets in any quantities. Please write us if you experience the slightest difficulty in obtaining supplies.

Bitro - Phosphate

prevalence of nervous ailments makes the present an opportune time to display Bitro-Phosphate. is a remedy you can honestly recommend and sell with profit to yourself and satisfaction to your customers.



Admess" The International Chemical Co. Ltd.
7, Wybert Street, Munster Square, London, N.W.1.

muertim

HERE is magic in the word as well as in the scene which it conjures up. Ages have passed since the fateful summer of 1914; cut off so

abruptly by the dread spectre of Since then summers have come and gone almost unrecognised. Today the pulses leap and the heart rejoices at the proximity of a real summer, and the parental determination to "take the

WINDOW DISPLAY OFFER.

For an order of £4 in value and over, which may be assorted, we will give 13 to the dozen, together with a good supply of coloured leates, "Vitalising the Skin," and showcards, and cash allowance for window display of 5/-.

family away" for the summer holiday is strong and not to be denied. The Pharmacist in seaside and country pleasure resorts is rightly anticipating a bumper season.

Midgley's Sunburn Soap is just the line to attract visitors to your Pharmacy. It relieves the painful sensation of Sunburn, and prevents the skin peeling.

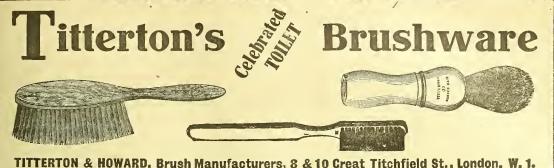
Midgley's Peroxide Soap and Cream are "seasonable" lines which make a strong appeal, being got up in artistic wedgewood blue cartons. Both prepartions are charged with an active percentage of peroxide, preventing and removing tan and freckles from the skin.

USE THIS FORM.

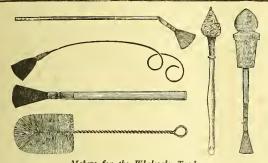
To CHARLES MIDGLEY, LIMITED, 5, Mayes Street, Manchester. Please send your suggested parcel, for which I enclose cheque charge my account £3 16s. net (Strike out whichever does not apply)

Slip label	Name
label	
may be affixed.)





TITTERTON & HOWARD, Brush Manufacturers, 8 & 10 Creat Titchfield St., London, W. 1.
FACTORY: ALBION WORKS, DALSTON LANE, E. 8.



Makers for the Wholesale Trade.

M. J. FECHER, LTD., llex Works,
Northwold Road, Stoke Newington, N. 18.

PERFUMERS! SHORTAGE OF LABOUR

Advertisers are prepared to undertake the blending of Shampoo, Tooth, and other Toilet Powders, in large or small quantities at lowest possible rates. Good workmansh p and prompt delivery. Ingredients supplied if desired at lowest market prices, Writestating requirements.

MARTIN & CO., 71 City Road, Finsbury, London, E.C.1.

PUFFS of ALL KINDS in DOWN and WOOL



SOLID FACE POWDERS
COMPLETE WITH PUFFS.
Inquiries invited by makers.

F. SCHUTZE & CO., Ltd., BLACK BULL WORKS, Caledo ion Market, LONDON, N.7.

BIDWELLS' LTD.

RELIABLE TOOTH BRUSHES.

Gloria Silverdrawn, 18/-

Mitre - - 14/-

Elephant - - 12/-

AT THE PLANT OF THE PROPERTY O

Anchor - 10/-

GROSS LOTS NAMED FREE. CARRIAGE PAID.

We do not Sell Foreign Tooth Brushes.

A selected £10 parcel of Hair Brushes from 30/- to 103/- per doz., carr. paid.

Made at our Factories, AXMINSTER, DEVON.

CAMEL HAIR PENCILS

ALL SIZES

THROAT BRUSHES

Bent or Straight. Wire or Wooden Handles.

IODINE BRUSHES

SHAVING BRUSHES

With Boxwood, Metal or Bone Handles.

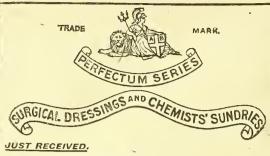
LARGE VARIETIES ALWAYS IN STOCK.

Also Puffs and Puff Boxes.

Wholesale & Export only supplied.

A. E. DEPRETER,

24 Holborn - LONDON, E.C. I



CONSIGNMENTS OF

Tooth Brushes

Brushes

EARLY INQUIRIES SOLICITED.

WRITE OR PHONE

Offices and Warehouse: 15-17 Worship Street, LONDON, E.C. 2.

Telegrams: "Aybelim, Finsquare, London."

Phones · London Wall 507, City 998.

Ladies' Vanity Cases

(Metal), with Puff & Mirror.

OXYDISED and GILT:

9/- 12/
15/6 18/
Very saleable during the holidays.

Bathing-Caps, Sponge Bags, Water-Wings & Xylonite Soap Cases.

THOS. SWALES

Druggists' Sundryman,

24 BUTTS COURT, & 89 ALBION STREET,

LEEDS.

FEATHEREDGE Rubber Sponges

LARGE STOCKS

THOROUGHLY SANITARV AND

DO NOT HARDEN

Verv

GOOD **PROFITS**

> for the Retailer

> > -0-

OBTAINABLE OF ALL

DRUGGISTS' **SUNDRIES**

HOUSES













Markt & Co., London,

American Merchants, SOLE IMPORTERS. 98-100 CLERKENWELL RD.. LONDON, E.C.

GOLDBEATER'S

ALSO

CAPPING

EVER PRODUCED,

DELIVERY THE

PURPOSES. SKIN FOR MEDICAL

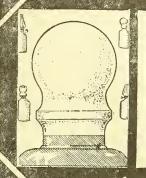


SNOW-WHITE OPAQUE ROLLED SKINS.

SOMETHING QUITE NEW. These Skins are damp and READY FOR USE. The raw material for Baudruche manufacture being now unobtainable, I have put this new production on the market in its place. ABSOLUTELY AS OPAQUE as Split skins and equal in appearance.

> Another New Speciality .- Try my CAPPING SKINS.

"Mine beat Sole Pioneer and Only all others." English Manufacturer: LESLIE GATES HAILSHAM, SUSSEX. TRANSPARENT SHEEP BAUDRUCHE



WHEN ONCE SEMREH

SELF - FIXING BOTTLE CAPS

come into use all others are crowded out! There is no room for makeshift methods to-day. Have you read the SEMREH Booklet?

The VISCOSE Development Co., Ld. BROMLEY, KENT Prompt dispatch can at present be given.



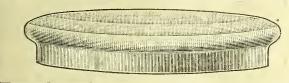
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Business Bringing **Blocks**

Are valuable assets to your advertisements when they illustrate the special feature you are advertising. Use blocks similiar to the one shown above and you will get more clients in your Testing Rooms.

Write to-day for a selection of illustrations suitable for Chemists' or Opticians' Adverts, and particulars of Free Type & Border Suggestion C -> EMISTS' DESIGN SERVICE,

12 Humberstone Gate



CELLULOID

for Pots and Bottles. F. W. DUROSE.

45 Queen Street, SMETHWICK, BIRMINGHAM.

Telegrams: "Durose Smethwick."



MENDS EVERYTHING.

PERFECT Liquid Glue CEMENT

Made from the finest materials obtainable. Guaranteed to retain its efficiency for Six Years. In 2d., 3d., 5d., & 7d. Tubes. Boxed in dozens. Also in Bulk for Carpentry. Joinery and Aer nautical Works, etc. ½-ib., 4-ib., 14-ib., and 28-ib. Tins.

Indent through Merchant Shippers. Export Cases at Cost., f.ob. London.

MENDINE CO. (Sole Proprietor, Francis W. Coombe 8 ARTHUR ST., LONDON BRIDGE, E.G. 4.

不不不不不不不不不不不不 TRADE MAR

Named after he ancient ovramids because of their dependable qualities, you get "Pyramid" Corks, our troubles are abolished. Get

Established 1839.

Chemists' Overalls Gardiner & Co.

We supply protective overalls and aprons in any colour or style required. They are made by experienced hands for all branches of the chemical trade.

Keenest Quotations sent on request, or a special representative will be pleased to call.

Head Office: Gardiner & Co. (The Scotch House) Ltd. 1 Commercial Road, E. 1.

Phone: 6650 Ave.



Write for complete Price List and Shade Cards to the actual manufacturers. We can guarantee prompt dispatch, best quality, and lowest prices.

"RAYOLENE" Ready Mixed PAINT.

Special Decorators' Quality. Supplied in 1, 2, 4, 7 and 14-lb. tins,

- "TEXALO," the Ideal WATER PAINT. Twenty beautiful shades. In tins and bulk.
- "FLINTEX" Dry Sanitary DISTEMPER. In Powder form. Supplied in 3 and 6-lb. packets.
- "GENIE," the Ideal Liquid SILVER POLISH
- "RAYOLENE" BLACK JAPAN.

The best preparation for Cycles, Fire Ranges, Mail Carts, Gas Stoves, and all wood or ironwork. In tins, to retail at 9d., 1/6 and 2/9.

- "RAYOLENE" OIL VARNISH STAINS. Far superior to methylated spirit preparations.
- "RAYOLENE" HOUSEHOLD DYES.

For Silk, Wool, Cotton, or Mixed Goods. In 3d. and 6d. packets.

Shade Cards, and prices of all above, free on application.

TEXALO MANUFACTURING CO.

PAINT & VARNISH MANUFACTURERS. SOUTH SHORE, BLACKPOOL, LANCS. GARDNER'S PATENT

"RAPID" SIFTERS & MIXERS

OVER 5,300 working in

almost every Trade where POWDERS are Sifted and Mixed and Lumps Re-duced, all being done at one operation and without loss by dust.

FOR HAND OR POWER.

CATALOGUES FREF.

WM. GARDNER & SONS, Engineers, GLOUCESTER



WHULESALE DRUGGI'TS, &c. We begit to call attention to the fact that car well-know whaten! Stills are made for beating by steam pression. Where this is a failable it forms a very cheap and efficient method of obtaining distilled water. Any pressure will suit from 10 to 200 h. Made in various sizes to produce from 14 to 12 gallous PER HOUR. Cost of distilled water made this way is practically mil. As with our Gas Stills, these are perfectly automatic.

For producing up to

14 gallons per hour, 9 gallons per hour,
5

Please Enquire for Quotation.

Please Empaire for Quolation.

The few most important places we give below afford evidence of the quality, efficiency and economy of the Steam Stills: National Physical Laburatory, 2 in use; Imperial Collect of Science, 8 in use; University of Wales; Pharmacentical Society; Guy's Hospital Bacteriological Denartment; and namy of the le ding Exeweries and Drug Houses etc. Pamphiets & particulars forward don application

Estimates submitted free if regulared for supplying and fitting committee



BROWN & SON. Alembic Works, 9 Wedmore St., Holloway N. 19.



SAFETY RAZOR SHARPENING

BY LATEST ELECTRICAL MACHINERY.

We guarantee a perfect edge on ANY blade, ANY make. Trade terms: 6d. PER DOZEN not.

Blades returned same day as received.

SEND US YOUR WORK. CO., 77a DALE STREET, LIVERPOOL.

LIVER RAZOR

For your Sieves and Wire Gauze try the actual Makers! RAMSEY &

198/202 ST. JOHN STREET, E.C. 1.

Telegrams: "Methodical, Smith, London."

Telephone: Holborn 6337 (3 lines)



SAFETY RAZORS

British Made.

Numerous patterns, suitable for all markets. English or Foreign catalogues on application. We are the largest makers in Great Britain.

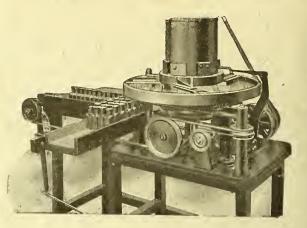
ROWLAND HODGES Ltd., Birmingham, Eng.

52





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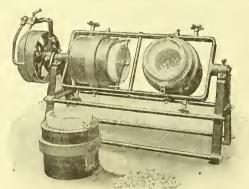
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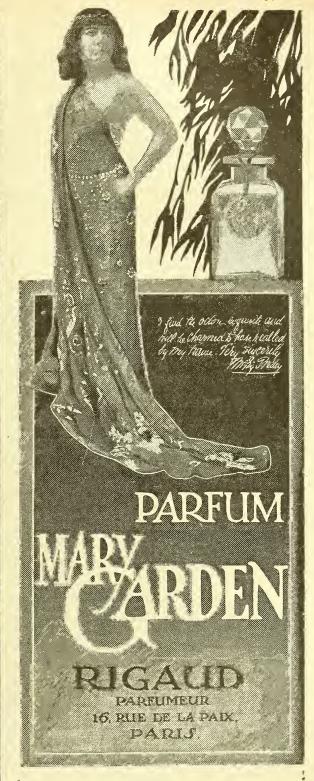
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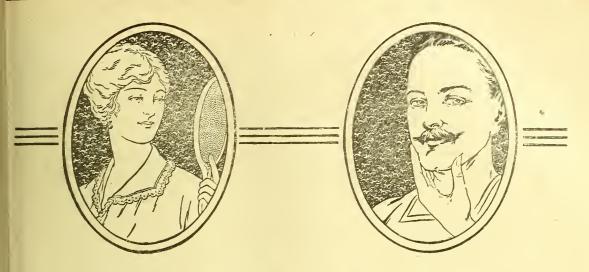
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New Books.

Millard, C. Killick, M.D., D.Sc. Population and Birth Control. 10th in, × 7th in. Pp. 48. 1s. (W. Thornley & Son, Leicester.) [This is the presidential address of Dr. Millard before the Leicester Literary and Philosophical Society in 1917. The author strongly advocates birth-control.]

control.]

Thysical and Chemical Data of Nitrogen Fixation. Compiled by the Ministry of Inventions Research Department, University College, London. 10\(\frac{1}{2}\) in. \(\times \rac{1}{2}\) in. Pp. 49. 2s. net. (Stadionery Office.) [This has been especially compiled for use in connection with the synthesis and oxidation of ammonia and the preparation and purification of hydrogen. Contains many tables and forty-seven diagrams.]

The Tenonts' Emergency Charter under the Rent Restriction Acts. 8 in. \(\times \rac{1}{2}\) in. Pp. 23. 7d. (Oliver & Boyd, Edinburgh.) [States the position clearly in popular language regarding standard rents up to 70\(\times \). the grounds and limits of increase, fixity of tenure, and furnished houses. A summary of the provisions of the four Acts dealing with war legislation regarding rent and mortgage interest.]

A summary of the provisions of the four Acts dealing with war legislation regarding rent and mortgage interest.]

The Wassermonn Test. Report by the Medical Research Committee of the National Health Insurance Commission. 9½ in. × 6½ in. Pp. 41, 3d, net. (Stationery Office.) [An interim report upon the consideration of the technical methods employed in the Wassermann test for syphilis, and the possibility of standardising the methods. Gives a complete account of the method of conducting the test employed at the Rochester Row Military Hospital. 'A useful pamphlet for those who desire to study the technique of the test.]

Experiences of the Great War.

Contributions to this section are invited.

XIII.-A Tank Attack.

WHEN our skipper came back from Brigade Head-quarters with the news that we were to attack on the morrow, I took no more than the usual interest in the boring details of the scheme. When, however, he also remarked that one tank would proceed up the Q-Valley and take the German Casualty Clearing Station at the corner of Wood No. 6, I began to sit up and take notice. A C.C.S. meant a dispensing-tent to me, and some interesting Boche drugs, so, later on, I claimed the valley job for my "bus," and got it. Zero was at 4.45 a.m., so we were trekking all night, and arrived at our starting-point about 4 A.M. With the aid of a "Primus" stove and some cocoa tablets (made by a firm better known for their drugs), we prepared some cocoa to wash the rum ration down. Then the barrage dropped and we were off. After proceeding about three miles, we sighted the camouflaged tents of our objective. We had orders to avoid firing at the Red Cross, of course, and so I at once gave the "Cease fire." At this point I sprayed the inside of my Cease fire." At this point I sprayed the inside of my bus" (by means of a scent spray) with ammonia to clear the air. I found this method of reviving myself and my crew very beneficial. We made a wide circle round the C.C.S.. and allowed our infantry to pass on to their final objective. We then got out into the open and proceeded to examine the place. We found two wounded British Tommies (both very pleased to see us), two Boche sisters, and one orderly. There were a few dead Boches in the mortuary, victims of our "hate" of the previous day. After some "bully and ciscuits" I proceeded to examine the dispensary and surgery, with the aid of one of my men, who spoke German fluently. In the dispensing-tent I found a mammoth collection of drugs, nearly all in tablet form. Each drug was contained in a small square box, and had a label signifying the name, dose, and what I took to be a code letter for re-ordering. A certain number of these boxes were contained in a large tin case. Two cases were strapped together, so that they could be carried over the shoulder—one in front and one behind. I saw many of our old German acquaintances in the shape of aspirin, veronal, etc. There were some large enamel containers of standard mixtures and of lotions. We made some lemonade with soda bicarb, and citric-acid tablets. sweetening it with some sugar found among the medical comforts. In the surgery I found a few interesting bandages made of paper, and some "cotton wool" made from some grass tangled together. A unit of the Canadian Army Medical Corps then took over the place. In the meantime the Canadian Y.M.C.A. had made themselves comfortable in a marquee, and were preparing to sell cigarettes, chocolate, etc., when we left. On the whole, the place was very fully equipped. The two Britishers we found there said that they had received very sympathetic treatment, and, much as I hate the Hun, I must give him the credit of at least one first-class hospital A. D. M. 18 56.

Wills.

MR. JOSEPH PETRACZEK. Ph.D., analytical chemist. 9 Charles Street, Bradford, who died on November 16. has left 8.8781. 18s. 11d.

Mr. Fred Billington, chemist and druggist, 201 Edge Lane, Liverpool, who died on January 12. left estate valued at 6.679!. 2s. 7d. gross, with net personalty 2,7901. 6s. 10d.

FOR aphis or blight in fruit-trees, the leaves of plantain (Plantago media) are stated to be an instantaneous cure if rubbed on the affected part. In New Zealand seaweed is wound round the stems of trees on which aphides are suspected.

English and Welsh News.

The Editor would be obliged if subscribers would send him marked copies of newspapers containing items of interest for insertion in this or other news sections of the "C, & D."

Lard again Controlled.

The Food Controller has decided that it is necessary for him to resume control of the supply, distribution, and prices of lard. An Order bas, therefore. been issued requisitioning stocks which were discharged from ship in Great Britain after August 9, and cer-tain stocks in traders' hands have also been requisitioned by individual notices served on the traders concerned. The requisitioned lard will be distributed under directions by the Ministry of Food, and at maximum wholesale prices which bave been fixed by the Imported Bacon, Ham. and Lard (Prices) Order, 1919. On and after September 1 the maximum wholesale prices prescribed by this Order will apply to all imported lard whether distributed by the Ministry or not. As a provisional measure a scheme of distribution of all lard will be brought into operation as from August 18, and the scheme will, for the time being, follow that which was in force at the time when control was suspended last spring. Retailers will, as from August 18, be tied to the wholesalers with whom they were registered on March 1, but consumers will not at present be required to register with retailers. A maximum wholesale price of 203s, per cwt. has been fixed for home-produced lard. The existing schedule of retail prices will continue to apply to all lard whether imported or home-produced, and the maximum retail price of all refined or home-produced, and the maximum retail price of all refined or home-rendered lard is fixed at 2s. per lb. as from August 11.

These measures do not apply to Ireland. As it will be necessary for the Ministry of Food to resume the purchase of hog products, the Imported Bacon, Ham, and Lard (Requisition) Order, 1919, prohibits as from August 9 dealings in lard outside the United Kingdom by persons in the United Kingdom.

Imperial Preference Defined.

The Board of Trade have issued under date August 6 the regulations determining what articles shall benefit by the Imperial Preference provisions of this year's Finance Act as being of genuine Empire origin, and fixing the proportions of the value of consignments which shall so benefit. The regulations are:

(1) Save as hereinafter provided goods shall not be deemed for the purposes of Section 8 of the Finance Act, 1919, to have been manufactured in the British Empire unless at least 25 per cent. of their total value is the result of labour

within the British Empire.

(2) In the case of those classes of those goods in respect of which an Order has been made by the Board of Trade under Section 8, Sub-section (2) of the Finance Act, 1919, no part of the goods shall be deemed to have been manufactured in the British Empire unless at least 5 per cent, of the total value of the goods is the result of labour within the British Empire.

(3) Where a number of separate articles are included in one parcel or shipment, each and every article shall be considered separately for the purpose of calculating the proportion of value due to labour within the Empire.

(4) For the purposes of these regulations the total value of an article shall be its cost to the manufacturer at the factory or works, and shall include the value of containers and other forms of interior packing ordinarily sold with the article when it is sold retail, but shall not include the manufacturer's or exporter's profit or the cost of exterior packing, carriage to port and other charges incidental to the export of the goods subsequent to their manufacture.

(5) In calculating the proportion of value which is the result of labour within the British Empire there may be included under the head of labour the cost to the manufacturer of any materials of purely Empire origin entering into the composition of the article including the interior packing specified in Regulation (4), the cost of manufacture, including wages, proportion of fuel, supervision and other factory expenses, and the cost of the labour of packing for retail sale.

The following may not be included in the proportion of value which is the result of Empire labour, namely, any materials or interior packings not entirely of Empire origin,

manufacturer's profit or the profit or remuneration of any trader, agent, broker, or other person dealing in the article in its finished condition, the expenses of placing the goods in outside packages for export and the cost of such packages, transportation charges, insurance and any other charges for services after the goods leave the place of production or manufacture.

(6) Any question arising on the interpretation of these regulations shall be referred to the Board of Trade, whose

decision shall be final.

Brush Trade Board

A Trade Board for the brush and broom trade of Great Britain has been established, consisting of three appointed members, fourteen members representing the brush trade, and fourteen representing the workers. The following are the names of the trade members: Mr. T. C. Bond (Coate & Co., the London Brush Works, Axminster, Devon); Mr. E. N. Kent (G. B. Kent & Sons, Ltd., 75 Farringdon Road, London, E.C.1); Mr. J. H. Latham (Lee & James, Ltd., Albion Works, Moseley Street, Birmingbam); Mr. A. B. Manning (Padley's Yard, Strand, Swansea); Mr. E. H. Matthew (D. Matthew & Son, Ltd., Tariff Road, Tottenham, London, N.); Mr. E. Bailey Page (S. D. Page & Sons, Ltd., Norwich); Mr. L. Simmonds (Reeves & Sons, Ltd., Asbwin Street, Dalston Junction, London, N.E.); Mr. J. A. Small Small & Co., 25 Dunlop Street, Glasgow); Mr. H. G. Taylor (D. Burrow & Sons, Hunslet Road, Leeds); Mr. T. Marson Till (Secretary, the British Brush Manufacturers' Association, 21 Bucklersbury, London, E.C. 4): Mr. A. Vowles (W. H. Vowles & Sons, Ltd., Broad Weir, Bristol); Mr. E. Wakely (383 Kingsland Road, London, E.8): Mr. C. H. Watkins (Hamilton & Co., Ltd., 116 Clerkenwell Road, London, E.C.1); Mr. H. Wilde, J.P. (Brushes, Ltd., "Kra" Brush Factory, Oldham).

Proprietaries Manufacturers' Association.

A new Association has been formed by manufacturers of proprietaries, having for its title "Association of Manufacturers of British Proprietaries." The following officers have been elected:

have been elected:

Chairman, Mr. W. H. Woodward (W. Woodward, Ltd.):

Fice-Chairman, Mr. C. Wylde (Thomas Keating); Treasurer,
Mr. J. Kenningham Condy & Mitchell, Ltd.); Secretary,
Mr. J. H. Horwill, 109 Temple Avenue, London, E.C. 4;
Committee, Mr. F. Brown (Lincoln and Midland Counties
Drug Co.), Mr. W. E. Farr (C. E. Fulford, Ltd.), Mr. F. W.
Gamble (Allen & Hanburys, Ltd.), Mr. E. King (Stephen
Smith & Co., Ltd.), Mr. N. Kingzett (The "Sanitas" Co.,
Ltd.), Mr. J. Lawson (Boots Pure Drug Co., Ltd.), Mr. H.
Parsons (Ashton & Parsons, Ltd.), Mr. C. H. Ratcliffe
(A. J. White, Ltd.), Mr. J. H. Reed (Mrs. Pomeroy, Ltd.),
Mr. C. Rowed (Thomas Beecham), Mr. Harold E. Webb
(Evans Sons Lescher & Webb, Ltd.).

It is felt by those interested that, in view of the uncertain outlook, the Association should be as strong as possible; and to this end the Committee has arranged to meet in a few days for the purpose of electing members. The subscription ranges from 3l. 3s. to 10l. 10s., according to the number of employés in the firm or company, the higher amount named being for those with fifty or more.

Rirmingham.

In Birmingbam it is not quite understood why there was so much hand-shaking and mutual congratulation on the result of the London by-law meeting on August 6.

Voting-papers for the L.A.E. Committee election have been received bere and are no doubt, being duly returned. Messrs. Lloyd and Tranmer are the local favourites for Group Two.

"Irish moss, an ideal food for pigs: 7 lb. of moss produces 336 lb. of semi-solid mucilage," runs the opening of an advertisement in the local Press. "Semi-solid" is distinctly good, and the exactitude of the calculation suggests a question for an examination-paper.

Many changes are taking place in the staff of Birmingham University. Professor Adrian Brown and Professor Poynting have lately died, and Sir Oliver Lodge, Professor Frankland, and others have retired or been translated. Within the past few days Mr. George Stephen West, M.A., D.Sc., who had been professor of botany at the University since 1909, and was an authority on algæ, has died rather

suddenly. Dr. West was born in Bradford in 1876. He was assisted in his department by Dr. Helen B. Elliott, wife of Mr. W. T. Elliott, the well-known dental surgeon who is President of the Birmingham Microscopists' and Naturalists' Union.

Liverpool.

Stimulated by the heat, retail trade shows some recovery from the stagnation due to the riots.

Mr. Robert S. Carrie, Old Swan, is spending a holiday in North Wales with Mr. W. R. Brown, the Glasgow representative of The British Drug Houses, Ltd.

Besides his attendance at the Town Hall to swear in special constables, Mr. Henry Peet, J.P., spent five hours with the military on "Loot Sunday." He carried the Riot Act in his pocket.

As President of the Liverpool Lyceum, Mr. W. H. Saunders (Ayrton, Saunders & Co., Ltd.) has taken a timely lead in securing the enrolment of many of the members, "without age limit," as special constables.

A Lancashire pharmacist who visited Liverpool this week stated that he had been sending bread by parcel-post to his wife and family during their stay at Blackpool, where for several days they had had to subsist on tea-cakes and "cream crackers."

Miscellaneous.

ENEMY PATENTS .- The British Association of Glass Bottle Manufacturers, Ltd., have been granted licences to use six bottle machine patents belonging to enemy

INQUEST .- At a Hampstead (London) inquest, held on August 12, on the body of Bertram Parnaby (23), late of the R.F.A., it was stated that he once started in business as a wholesale chemist, but failed owing to illness. Other evidence having been given, it was found that he had hanged himself while insane.

SERIOUS EXPLOSION IN A SHOP.—On August 9 a leakage of gas in the shop of Mr. William Flack, chemist and druggist, Fortune's Well, Portland, caused a violent explosion, the shop-front being blown into the road and the stock considerably damaged. Mr. Flack was buried beneath the débris, but escaped injury other than cuts and burns. No one else was hurt.

MYSTERIOUS WINDOW-FRACTURE.-A window in the factory of the Anglo-American Pharmaceutical Co., Ltd., Dingwall Road, East Croydon, was recently broken-by a bullet, it is believed; a number of packing-cases, however, are stored close to the window, and no missile has so far been found. Windows in this factory were similarly pierced on five occasions a few years ago. A reward has been offered for information leading to a conviction for the damage.

IN THE COURTS .- At Bow Street Police Court, London. on Angust 12, Maurice Ernest (or Ernst), homeopathic consultant, Cromwell Road, S.W., was fined 100%, with 10%. 10s. costs, for using a name other than the name by which he was ordinarily known at the commencement of the war, he not being a natural-born British subject. It appeared that he had previously been fined for a similar offence. Notice of appeal was given.—At Sonthampton, on August 13, the Chinese steward of a ship was fined 27t. for being in possession of 6 th. of block opium and three pots of opium prepared for smoking.

Poisonings.—An inquest was held at Gateshead, on August 9, on the body of Ernest Stanley Smith (28), described as a manufacturing chemist's assistant. evidence showed that he took a poison (the name of which was not given) when it was supposed by those about him that he was taking a dose of tonic. A verdict of "Suicide while of unsound mind" was returned.—While suffering recently from toothache, Miss Gertrude Leng, a Hull nurse, rubbed her gums with phenol. She was subsequently found lying unconscious, death taking place shortly afterwards. A verdict of "Death by misadventure" was returned at the inquest.—A similar verdict was returned at Wood Green, on August 7, in the case of an infant named Woods, who drank carbolic acid from a bottle left within reach.-At Stratford, a young child died from drinking glycerin of belladonna.

WIGAN TECHNICAL COLLEGE.—The number of students Wigan and District Mining and Technical College during the session 1918-19 was twenty. Of these, four were full-time (day) students; the others put in a minimum of two afternoons a week. All took pharmacy, materia medica, dispensing, and chemistry—several, in addition, attending classes for the London Theorem Technical College (day) and the college of the college University matriculation, book-keeping, typewriting, and shorthand. Besides the ordinary lectures, students have had instruction in the physical and chemical laboratories, microscopical work, and visits to hospitals, works, etc. Students who have not previously had experience in a shop or dispensary have been granted the opportunity of gaining such experience in local shops as part of the summer vacation. The formation of a botanical garden in the local park is being undertaken.

Irish News.

Brevilles.

At Liscleen, North Tyrone, John Rutledge, iarmer, died from carbolic-acid poisoning. He had been in a depressed state for some time.

The Local Government Board has notified the Clonmel and other Irish Boards of Guardians that contractors for medicines are entitled to charge extra, to cover the increased spirit duty, on certain specified medicaments.

At Bagenalstown Petty Sessions, on August b, Michael Farren, rn.c., Bagenalsiown, was committed for trial on a charge of unlawful intercourse with a girl under sixteen years of age. Bail was amowed.

At the recent Swinford Petty Sessions, Mr. P. Butler (Inspector for the Pharmaceutical Society of Ireland) charged Hamilton & Co., Medical Hall, Swinford, under Sections to and 17 of the Amending (Pharmacy) Act of loso, on two summonses with having, on May 2, and 30, kept open shop for compounding and dispensing medicines without having a pharmaceutical chemist in charge. It was stated on behalf of defendants that a member of the hrm was a quantied chemist, and that Miss briggs, who was alleged to have compounded the medicine, was a registered druggist. Quantied chemists were also said to be diment to find. The Court heid that the charges had been proved, and a fine of os. in each case was imposed. Costs to the amount of li. were also granted, one-third of the penalty and costs to go to the hispector.

DCHBat.

Owing to the local Peace celebrations the chemists' establishments in the city were closed on August 9.

At the recent Belfast Assizes, Charles Tennant & Co., Ltd., sued the Ulidia Chemical Co. for goods sold. Mr. W. Beattle, for the plaintiff, asked that the action be struck out, both parties to pay their own costs, and tne 12t. 17s. 1d. longed in court with the defence to be paid out to the plaintiff. Mr. A. Black, for the defenuant, consented, and this course was adopted.

Duplin.

The Joint Industrial Council in connection with the Irish Drug Trade has been summoned for September 17 in Dublin, to consider the fresh demands of the assistants as to wages, hours, conditions, etc. Ine Council has already held two meetings, and at the latter these demands were formany submitted. The formation of the Council results from the establishment of the frederation of Irish Chemists. The other parties to the Council are the National Amalgamated Union of Warehousemen and Clerks, with which the assistants are identified. Northern representatives of the employers on the Industrial Council are Messrs. H. G. Pring, W. J. Hardy, James Tate, and J. C. Culbert, and in their absence Messrs. James Dundee, A. Wilson, S. Suffern, and J. E. Connor, J.P. (Newry).

Scottish News.

Brevities.

A site has been obtained near Grangemonth for new works for Scottish Dyes, Ltd.

Lindsay's, Nethergate, Dundee, have added to their retail business that of wholesale druggists and druggists'

The West of Scotland Agricultural College has issued two pamphlets dealing respectively with the production of honey and the manufacture of rennet.

A Scottish chemist whose principal side-line is popular drinks found that his daily takings had averaged over 201. recently, while he had been away on a holiday.

The public are apparently learning that chemists' prices must rise. A Scottish pharmacist, on supplying a lotion to a child the other day, was asked, "Please is there any thing to pay for the cork?"

The Rev. A. J. Marshall, Monimail, who was the pursuer in a recent unsuccessful action in the local Sheriff's Court, qualified assa chemist and druggist in 1886.

"I had to pay last year 7l. a week for a qualified eum," writes a correspondent; "but I have lately had one for 3l. a week." A similar reduction in fees is reported in the medical profession, which, judging by the present condition of the medical schools, is likely to become overcrowded in the near future.

French News. (From the "C. & D." Paris Correspondent.)

THE ANNUAL MEETING of the General Association of French Pharmacists will be held in Strasbourg on August 31.

CERTAIN IMPORTS AND EXPORTS, hitherto prohibited, were released by official decree recently. But the importation of "compound medicaments," as well as the exportation of oils and vegetable fats, are still banned unless by special licences.

Driving Out the Hun.-The pharmacists of German origin have been expelled from Alsace-Lorraine, and the French Government is selling or leasing the pharmacies to Frenchmen, preference being granted to men who have suffered through the war.

THE FUTURE OF SCIENCE.—M. Daniel Berthelot's recent statement that "the men of our generation have witnessed the apogée of scientific research of which the decline has perhaps already commenced," has aroused much interest. The "Temps" has invited the opinions of leading scientists, and many decline to accept his view. M. Moureu thinks that manufacturers should endow scholarships on the lines of the "Liebig" recently instituted by the Germans, and leave the winners free to choose between the factory, the research laboratory, or the professor's chair.

The Latest in Dressings.—Since the signing of peace M. G. de Pawlowski (of "Le Rire") has resumed his entertaining notices of "New Inventions and Latest Novelties." A leading surgical-bandages firm, he gravely states, is bringing out a new "right-hand glove" for business men, which has the outward aspect of a bandage. This "glove-bandage" (thoroughly soaked in carbolic and diffusing an intolerable odour) is worn during business appointments. It allows its lucky owner, under the pretext of a badly injured hand, to refrain from signing any papers which may be submitted to him. A few excuses and expressions of sympathy, and the trick is played.

M. CHARLES MOUREU, Chairman of the late Inter-Allied Chemical Conference at London, was awarded the silver medal at the Paris School of Pharmacy in 1886, the Faillet Prize in the same year, and the gold medal in 1887. He has been a hospital pharmacist since the days of his

"internat" (1886-91), when he won the silver and gold medals (annually awarded to house-pharmacists) at the competitive examinations. He began his University career in the laboratories of the Paris School in 1894, and in 1907 became titular Professor of Chemical Pharmacy, leaving last year for the College de France. He has sat on the Codex Revision Committee since 1910.

PARIS SOCIETY OF PHARMACY.—At the July meeting of the Paris Society of Pharmacy the nomination of the seven sub-committees formed to study modifications for the next edition of the Codex was ratified. Each sub-committee is composed of five members.—M. Herissey read a paper on The Best Methods of Preserving Oxydising Ferments of Fungi. M. Moureu offered tickets for his lecture on Sir William Ramsay. A letter was read from a corresponding member elected in July 1914, complaining that he had not yet received his membership certificate. Five years is probably a record, yet in this case comprehensible. Curiously enough, this correspondent's name is "Verdon."

THE EIGHT-HOURS DAY .- In view of the introduction of the eight-hours day into France, the pharmacists of the Isere district have regulated the hours of work in the pharmacies. From April 1 to September 30 the pharmato 6.30 p.m.; from October 1 to March 31 from 8.30 a.m. to midday, and from 2 p.m. to midday, and from 2 p.m. to 7 p.m.; on Saturdays from 8 A.M. to midday, except when there is a public holiday during the week. The assistants will undertake night duty in turn, and a supplementary charge will be levied of 1s. 8d. up to 9 p.m. and of 4s. after 9 p.m. These charges will be paid to the assistants, to whom also one week's holiday with salary will be granted.

THE LABORATORY OF CURIE.-M. Maurice Barrès, the well-known author, contributes an article to a Parisian daily on the inadequacy of French official patronage of science, and describes by way of illustration Curie's wretched laboratory at the Municipal School of Physics and Chemistry. After the savant's great discovery, the Faculty of Sciences offered him a professorship, but no laboratory. At last, when the Press had taken up the matter, the Government voted credits. But Curie was not consulted. Germany, in the meantime, had erected laboratories, and the Universities invited Pierre Curie, offering the means of success, besides financial conditions of an extremely advantageous character. But Pierre Curie died without obtaining the laboratory which was the almost indispensable instrument of his genius.

FRENCH OPTICAL INDUSTRY.—From 1904 to 1914 the value of German optical goods imported was 23,000,000 francs. During the war the French output was raised from 4 tons in 1914 to 18 tons (80 per cent. of the total production of the Allies) in 1918. The number of prismatic field-glasses produced in France in 1914 was 1,500: in 1918 it was 15,000. The Allies were kept supplied with French optical goods, and the American Army was also furnished. The Ministers of Public Instruction and of Commerce have now suggested the foundation of a French Institute of Theoretical and Applied Optics, and it is hoped that private capital will provide the principal part of the necessary funds. Much has already been given, and the Council of the Institute is endeavouring to secure the promise of annual subscriptions from firms and persons

M. BOURQUELOT, so long Professor of Galenical Pharmacy at the Paris School, was complimented by his colleagues of the Paris Society of Pharmacy upon his recent election as a member of the Academy of Sciences. M. François (President of the Society) remarked that M. Bourquelot's researches in biological chemistry were considerable, and it was doubtless the study of chemical equilibrium in regard to ferments which the Academy had desired suitably to acknowledge. Professor Bourquelot replied that it was the study of galenicals which had gradually led him into these researches. M. Moureu said that M. Bourquelot is the fourth pharmacist now sitting in the Academy of Sciences, and of six candidates for a recent vacancy in the Chemical Section five were pharmacists.

South African News.

(From "C. & D." Correspondents.)

"The Chemist and Druggist" is supp'ied weekly to members of all the Chemists' Societies in South Africa.

Charge for Packing-cases.—In an alarmist note from the Johannesburg correspondent of the London "Daily Mail" the statement is made that "a wholesale chemist complains that an English firm charged him nearly as much for an ordinary wooden case as for the goods inside it, thus adding 80 per cent, to his prices and making it impossible for him to deal with Great Britain any longer. In every class of business I hear much the same story. American, Canadian, and Japanese firms are pushing their trade with tremendous vigour. It is also stated that the Germans are trying to get a footing again, either direct or through neutral countries."

Pharmaceutical Society of the Orange Free State.

The annual general meeting was held in Messrs. Petersen's rooms on March 11. There were present: Messrs. Greenwood (President), J. Reid (Vice-President), F. Carter (secretary), Prophet, Taylor, Abelson, and Weller. Messrs. Crawford and Schlenzka (visitors) were also present. The President referred to, the death of Mr. present. The President referred to, the death of Mr. Joshua Rawling, a past-President of the Society, and a vote of sympathy with his relatives was passed, the members upstanding. A letter was read from Mr. Crossley Holland, asking for information as to the pharmacy laws of the Colony. It was proposed by Mr. Prophet, seconded by Mr. Taylor, and carried, "That copies of the O.F.S. Med. and Pharm. Ordinance 1904 and of the Bill proposed for the Union of South Africa be sent to Mr. posed for the Union of South Africa be sent to Mr. Torossley-Holland, together with the amendments to that Bill proposed by this Society. A letter from the Natal Pharmaceutical Society, relative to a proposal to endeavour to obtain the cancellation of the registration of certain German medicinal products, was read. It was proposed by Mr. Carter, seconded by Mr. Weller, and carried, "That the Natal Society be informed that their letter had been sent to the O.F.S. Medical Society, for the information of its members; and, further, that if the Government is approached directly on the subject, the Society will support the Natal Society in its action." Mr. Society will support the Natal Society in its action." Mr. Taylor proposed, and Mr. Prophet seconded, a motion, which was carried, "That a copy of the Natal Society's letter be sent to the Secretary of the O.F.S. Medical Society, and that he be informed that the subject matter of the letter is endorsed by the Pharmaceutical Society O.F.S. A letter from Mr. J. Austin Thomas, of Ladybrand, tendering his resignation from the Society, was read. It was resolved that Mr. Thomas be asked to reconsider the question of his resignation. A letter of thanks from Mrs. J. Reid to the Society for the present sent on the occasion of her wedding was read. Mr. Crawford, Mr. Nowell, and Mr. Schlenzka were elected members of the Society. The President, Mr. Greenwood, returned thanks for the support received by him during his year of office, and a vote of thanks was accorded to him. Mr. J. Reid was elected as President for the ensuing year. The following were elected to the remaining offices: Mr. F. Carter, Vice-President; Mr. Crawford, Secretary and Treasurer. Members of Council: Messrs. Taylor, Nowell, Weller, Prophet, and Schlenzka, with the above three officers, ex officio. Mr. Greenwood gave notice of motion that at the next meeting he would move that the annual subscription be increased. A financial statement is to be produced at the next meeting. Mr. Crawford subsequently resigned the office of Secretary and Treasurer, and Mr. C. Weller was appointed.

SCHOOLCHILDREN in Devonshire are, it is stated, each earning several pounds weekly by picking whortleberries for use in the dye industry.

Colonial and Foreign News.

ARGENTINE RESTRICTIONS.—The Argentine Executive has issued a decree restricting the importation of alkaloids.

Prague's New Chemical Factory.—'The "Chemical Works have been registered with a capital of 100,000 kr.

"Instruction in English, particularly in English pharmaceutical-chemical terms, wanted," runs an advertisement in the Dutch "Pharmaceutisch Weekblad," July 19, 1919.

Danish Dye Industry.—A factory near Copenhagen has succeeded in producing intermediary dye-products, and the intention is that Denmark should have a chemical dyes industry of her own.

WAR STOCKS TAKEN OVER.—The Köln-Rottweiser Company in Berlin is to take over conjointly with the United Chemical Works, Charlottenburg, from the Imperial Realisation Office the disposal of the stocks of glycerin, and it is reported that these two companies, along with the Dynamite Trust, are to form a limited liability company to undertake this task. The United Chemical Works, Charlottenburg, have a patent for the production of glycerin from sugar-beet.

German Socialistic Suggestions.—The Socialisation Commission of Germany recently proposed that municipalities should have the right to take over, among other private enterprises, apothecaries' shops. The nationalisation of everything in connection with the healing art is now suggested, including the medical profession and the midwife's calling; apothecaries' shops and drugs; sanitary inventions; hospitals and maternity institutes; medicinal springs and other health resorts.

DUTCH MUNICIPAL PHARMACY.—The municipal pharmacy of The Hague made up 171,121 prescriptions in 1918, for which the receipts amounted to 96,330.10 florins (average of 41½ cents for each prescription, i.e. 8¼d.). From this total, 25,346.74 florins must be deducted for the supply of surgical dressings. Of the balance, 25,513.45 florins is the remuneration for compounding these prescriptions, so that the actual charge made, per prescription, averages 3d., a sum which is considered far too low.

The Co-operative Movement.—Among Continental pharmacists there is at present a growing movement in favour of "Buying Associations" on co-operative lines, with the object of abolishing the wholesaler as a middleman. There is also a demand for a larger margin of profit on specialities. These activities are particularly advanced in Belgium, and now Italy has joined in as a result of a recent meeting of the Pharmaceutical Federations. There is a co-operative pharmaceutical central in Milan, which has recently opened a branch in Genoa.

Threats at Ludwigshafen.—The Allied Economic Section have threatened compulsory measures unless work at the dye factories at Ludwigshafen is resumed. This has hitherto proved impossible, as the machinery had first to be put in order and sufficient raw material was not available. A resumption of work under the control of French officers, most of whom are chemists by profession, would mean revealing all the secret processes. After setting forth these facts, Herr Erzberger has sent an energetic protest to the Allied Authorities against the action of the French.

Germann's Fears.—The clause of the Peace Treaty whereby France may demand any quantity of the more valuable products of distillation in place of raw coal tar is criticised by the "Weltwirtschaftszeitung." No objection is raised to the export of ammonium sulphate to France, provided the French Government is willing to wait until nitrogenous fertilisers have first been assured to German agriculture, which has been starved in this respect during the last few years. The sections of the clause dealing with the dyestuffs and pharmaceutical products are, however, held to be the worst, for it is feared that German competition will be killed outright if foreign chemical firms learn the German trade secrets and cost of production of this branch of the industry.

Luton Apprenticeship Conditions.

THE National Amalgamated Union of Shop Assistants, Dilke House. Malet Street, London, W.C., send us the following schedule compening conditions of apprenticeship drawn up recently by the Advis ry Sub-Committee for Juvenile Employment in connection with the Luton Employmen: Exchange. The Committee consisted of representatives of the Javenile Advisory Committee, the Luton Tradesmen's Association, the Ministry of Labour, and the National Amalgamated Union of Shot Assistants, Warehousemen, and Clerks.

Indenture.—All apprentices shall be bound, and an indenture of apprenticeship entered into which will provide for the efficient teaching of the trade, and the usual

safeguards for employer and apprentice.

Age of E to .—The age of entry into apprenticeship shall be fourteen years.

Length.-The term of apprenticeship shall be four

Probation.-Beiore the indenture is entered into the juvenile shall be employed in trial for a period of four

Teeks at the rengmised indenture rate of pay.

Tearing.—Training will be given in the employer's establishment, and every facilitity shall be given for

Holiday - Fourteen consecutive days annual leave, exclusive of general holidays, shall be allowed, with pay. throughout the apprenticeship

Overtime. - Apprentices shall not be called upon to werk overtime.

Premiums.-No premium shall be asked for.

Wages. - The ioliwing weekly wages shall be paid:

Boys.				4	GIRLS.						
151	Year			14	_	151	Six	morths		10	-
200	Tear			10	-	2nd	SIX	months		12	5
ora	Tear			24	-	2nd	vea:			15	-
4-1	Vear			23	-	5mg	Tear			30	-

Howe. The fall wing weekly hours shall be worked. inclusive of meal-times, and times allowed for attendance at day continuation schools: First year, 40 hours; second year, 42 hours: third year, 45 hours: and fourth year,

Trades Included .- The stheme shall apply to the following sections of the distributive trade: Bakers and confectioners, boot dealers and repairers, butchers, drapers, process and provision merchants, hardware merchants, ironmongers jewellers, stationers, sub-post office assistants, furnishers, clothiers and outfitters, costumiers, art beedle-workers, musical-instrument dealers, restaurant workers, hairdressers, cycle dealers, fruiterers and florists, chemists, and the photographic trade. Special Candidates.—Where candidates for entry into

apprenticeship are above the age of fourteen years, each case shall be considered on its merits by the Apprenticeship Committee, and conditions based on the principles of this scheme arranged.

Ar a recent meeting, held at Haverfordwest, the Pentrokeshire Insurance Committee approved of resolutions, passed by the Panel Sub-Committee, to the effect that the quality of drugs and appliances supplied had been found satisfactory; also that the explanation received in regard to alleged excessive prescribing had been accepted. Notice of approval was sent to the Insurance Commis-

THE directors of the Thermogene Works. Haywards Heath, on August 9 extertained upwards of sixty of their employes in an expursion to Bramber. Dinner was served at the Casile Hotel under the presidency of Mr. Vivash, and after an excellent repast Mr. Carlyke proposed. The chairman, directors, and staff of Thermogene, in which he made sympathetic reference to the absence of the chairman of the company Mr. Windsor through illhealth. In the afternoon sports were held in the grounds of Bramber Castle, and the prizes were distributed by Mrs. Vivash. After tea there followed dancing and a

At the Central Hall.

By a Protestant Cockney,

HEROICS move me, but mock heroics make me laugh. When I received my presidential letter, postcard, and folaw-up letter, I laughed and used the card to order goods. I suppose that was why I did not get another card and telegram, so I attended at the Central Hall to acquire the latest Bloomsbury tips on how to get out of a muddy the tatest bloomsbury tips on how to get out of a muddy ditch. There had been a Welsh revival, and several striking scenes been witnessed at the penitents' form. Country visitors came to town with the dour intent of teaching the young Cockney manners, and for the express purpose of setting Umpty Dumpty and Sin Oracle back on the wall. But the Cockney is an irreverent animal which never grows up. How I laughed at this collection of Day Orac attitude and believe the collection of Day Orac attitude and believe to the collection of Day Orac attitude and the laughed at the collection of Dug Outs sitting solemnly blinking their eyes and reminiscing over their escapades before the Aquarium was demolished to the glory of Wesley. Was Apparium was demolished to the glory of Wesley. Was it '65.' Oh no. '65.' There was one who vaunted that he knew pharmacy when it was muling and puking in its nurse's arms. But even the Cockney is a law-abiding animal, and minorities must be snuffed out when they become too cheeky. I nearly had a fit when I heard the crowd boisterously greet Old Skinner as he walked across the platform. I thought Sir Oracle had sandbagged him for good and all. And Campkin, too more boisterous still. White got the backwash, and he seemed as pleased as a dog with two tails. Umpty Dumpty tried to explain the inexplicable and gave it up as a bad job. "Why didn't I get a telegram." "Vote!" "We know your tricks." "What's up your sleeves now." "No speeches." "Vote!" "Vote!" "Vote!" Being a mere Cockney, I found it delicious. It cost me twopence by the bus. The stewards were another joke. white buttons, with little blue letters on; it was the only striking thing about them, for they couldn't keep order for nuts; like Brer Rabbit, they mostly laid low. Wolff had a go, but they didn't like it a little bit. Had they not come down from the backwoods to teach these Cockneys manners and pay their respects to Umpty Dumpty and Sir Oracle, with his tin soldiers on brass wheels? Vote! That did it, and even the lady could not stem the tide. Five hundred backwoodsmen pledged not to return until Umpty Dumpty and Sir Oracle had regained their dignity. Bless em all, good simple souls, they have returned, and the Cockney is still blithe and gay and in possession too. Sir Oracle apologised, too: my friend saw a near-he called it a crocodile's tear. don't believe it. for you only hear crocodiles weep. And Umpty Dumpty told as he was the first Scotch President. and the wicked one even in the Central Hall-whispered it were well if he were the last, unless they send better than Umpty Dumpty. He burst into the National An-them: but, as a true Cockney. I would have preferred the finishing touch to have been a Welsh wail by Sir Oracle with the send of the control of the send of the control of the send of the control of Oracle with the crowning mercy of Umpty Dumpty in his chain as the dancing Dervish over the body of pharmacy slain to make a holiday for a Tite Barnacle. And it cost me twopence.

At the meeting of the newly-elected Salford Pharmacentical Committee, he'd recently, the following officers were elected: Chairman, Mr. W. F. Cuttiford, Secretary, Mr. E. H. Simmons, Treasurer, Mr. D. Lewis, Mr. J. W. Gill was thanked for his services as Chairman during the past five years, and Messrs. Cuttiford, Coates, and Simmons were re-elected on the Pharmaceutical Serwice Sub-Committee.

The first meeting of the Shropshire Pharmaceutical Committee was held at Shrewsbury on August 12, when Mr. W. Gowen Cross was elected Chairman and Hon. Secretary. It was agreed to fill four vacancies by coopting Messrs. F. E. Hunt Wellington, H. D. Maclean Shrewsbury, R. Reeves Oswestry), and T. R. Sparrow Bridgmorth. A vote of thanks was given to Mr. V. Bridgmorth. A property for his past services. Barnes Market Drayton) for his past services.

SIODETE.

Venereal Disease Act Case.

What were described as the first convictions at any Record Court of the country, for offences under the Venereal Disease Act took place on August 7 at the London Quarter Sessions (Clerkenwell), when, before Mr. Allan Lawrie (Deputy-Chairman) and a common jury, Mr. William Shadforth, Ph.C., and Mr. John Wilson, chemist and druggist, his manager, appeared in the concluding stage of the proceedings against them for having (1) contrary to Section I. of the Venereal Disease Act inserted an advertisement in the "Daily Telegraph" of June 24 offering to treat persons generally for venereal disease, and (2) contrary to Section II. on specified dates offered, for reward, to prescribe a certain remedy for the same. The verdict of the jury and the sentences were briefly reported in the C. (4, 1). August 9 p. 48

same. The verdict of the jury and the sentences were briefly reported in the C. & D., August 9, p. 48.

In his address to the jury, Mr. Curtis Bennett, K.C., counsel for the defence, described the prosecution as an attempt to make illegal something which the law had never specified as being illegal, and which the House of Commons, when the Act was under consideration, refused to make illegal by rejecting a clause making it so-the mere selling of remedies for venereal disease. Under existing enactments there was no provision compelling a sufferer from venereal disease to notify the authorities of the fact, nor was there anything to prevent a person so suffering from asking for a particular article for use as a remedy. What the Act, under which the prosecu-tions were taken out, aimed at was to prevent a chemist or any other person assuming and performing functions which strictly belonged to members of the medical profession. It was contended by the prosecution that the advertisement referred to in the summonses offered to treat venereal disease for reward, but that advertisement had not only appeared in the daily paper named, but had been published in dozens of the leading London and provincial daily, weekly, and Sunday papers for years past without any objection being raised to it. Experienced people who read it, and were most jealous of the honour and reputation of the papers which they read and who also, realised the danger of breaking the law, never saw anything wrong with the advertisement. It referred to almost every ailment to which flesh is heir. The remedy—"Blood Tonic"—mentioned in it, to which the prosecution took exception, was followed by a reference to other tonics-tonics for the brain, nerve, heart, neurasthenia, skin and beauty, huskiness and sore throat, excessive stoutness, rheumatism, malaria, and many other things. How, therefore, could it be urged that such an advertisement was an offer to treat and prescribe for venereal disease? Curiously enough, immediately beneath the announcement on which the informations were laid was another relative to a well-known ointment which was recommended for the cure of practically the same troubles as those mentioned in Mr. Shadforth's advertise-Were the proprietors or manufacturers of this ointment, Mr. Curtis Bennett asked, to be prosecuted? Passing on to deal with the labelling of the "Blood Tonic" as "Prescription 606," he stated this number was adopted by Shadforth long before the Venereal Disease Act was passed and at a time when the celebrated German specific for syphilis was not generally known in

The Deputy-Chairman, in his summing up, pointed out that the defendants were not charged with having actually treated a person, but with having by advertisement offered to do so. He admitted that it was difficult to define exactly what prescribing meant. They were, of course, aware of the prescription usually given by a doctor to a patient in which were written signs and terms unintelligible to the ordinary individual, but which were perfectly intelligible to the chemist to whom it might be taken for the purpose of being dispensed. That was one and the generally recognised method of prescribing. If a person went into a chemist's shop and, picking up a bottle labelled "Cough mixture," stated that he was troubled with a bad cough, asked the chemist if it was good for a cough and received a reply in the affirmative,

then he thought the chemist was clearly prescribing in the manner meant by the Venereal Disease Act, though not so clearly and specifically as was done in the circumstances related in this case. What was stated in the evidence as having happened was that Inspector Currie and Sergeant Dodd, each having visited the shop individually vidually and on different occasions, were told by defendant Wilson that the tablets mentioned in the advertisement were made up for a specific purpose, for the treatment of a disease which the Act made it illegal for anyone but a qualified medical man to treat, and that the tablets were then bought by them from him to be used for that specific purpose. Under these circumstances he thought the jury were entitled to find that this was prescribing in contravention of the terms of the Section of the Act. They would have to ask themselves whether the words in the advertisement "Prescription No. 606" were not a prescription that would induce anyone, apart from the police officers, to call at defendant Shadforth's premises and purchase it on the understanding that it was a remedy for a certain disease, and if they came to the conclusion that it had this tendency they would be justified in saying that defendants, by advertising and selling the article in the manner described. were prescribing. It had been argued for the defence that, because Inspector Currie, on the occasion of his calls, had put leading questions and got straightforward and truthful answers, no offence had been committed. But what were the facts? The inspector said to Wilson, "I have seen your advertisement about your 606 pill. Is it good for venereal disease?" It might have appeared to Wilson that a question asked in that way could meet with no other answer than one in the affirmative; but he went further and said, "They are for that purpose." Did not that mean that the pills were made up, in his for venereal disease? Or when he said, "They are for that purpose," could it be suggested that he was not prescribing? If this instance stood alone the jury might think that the question was one which he had answered in the hurry of the moment, and that if he had had time to think over the matter he would have replied, "I am not allowed to give you advice; you must go to a doctor But they had also the case of Sergeant Dodd, who, on asking Wilson "What is your 606 treatment?" received the reply from him, "It's the best you can have!" The sergeant then asked, "What for?" and was immediately told "for syphilis." In this case, the words were not put in Wilson's mouth by any leading question; he was in no dilemma as to whether to tell a lie or tell the truth by saying that if he said what the article was used for he would be breaking the law. But even then Wilson went further, for on being asked by the sergeant "What about the after-effects?" he answered him, "Absolutely the best." It was for the jury to say whether in this case Wilson gave advice contrary to the Act. With reference to Shadforth's connections with these transactions the jury-knew from the evidence that Wilson had no financial contrary in pressing the sales of these articles or other interest in pressing the sales of these articles. There was only one article on the sale of which he received any commission, his other remuneration was that of an ordinary wage. If it was true, as Shadforth stated in his evidence, that Wilson had from him explicit instructions not to prescribe and not to give advice about venereal disease, and not to increase the sales of the articles used for it unless they were specifically asked for or prescribed by a medical man—if in spite of these instructions Wilson did push the sales in the way indicated his conduct was somewhat extraordinary. on the other hand, his employer must have known what he was doing. It was for the jury to form their own con-clusions on what Shadforth stated in his evidence, it was for them to say how little or how much they believed of what he said as to the instructions he gave to Wilson and his other employés. The fact remained that his statements in the witness-box had not been corroborated. nor had Wilson in any way adhered to the orders which were stated by Shadforth as having been given to him. If a person entered a chemist's shop and asked for a particular medicine which, as Shadforth had stated, he

had sold for many years for a specific purpose, was it necessary for him to say or even to pretend that he or someone he knew was suffering from venereal disease before the prescription could be given? Shadforth told them that prior to the passing of the Act he invariably asked the person to get a person to advise him, and that if the person refused to do so, he then inquired as to all the symptoms and then prescribed the proper remedy. He added that since the Act now precluded his adopting this course, and since people now visited his establishment and other places where they could get the articles previously prescribed for venereal disease without being asked anything about the symptoms, he could not be regarded as prescribing when he sold what was asked for. If, however, the Legislature decided that it was a dangerous practice for an unqualified person to prescribe for venereal disease as was formerly done, did it not seem quite as dangerous for supposed remedies to be sold in the way indicated without inquiry being made, or without any prescription being given? In his opinion the line of argument suggested by Shadforth's statement was not sound. Dealing next with those counts relating to the issuing and publication of the advertisement, the Deputy-Chairman said Wilson had nothing to do with this, and he therefore directed the jury that there was no case against him on these counts, as Shadforth alone was responsible. The argument had been put forward that no offer of treatment was made in the advertisement, but if a man, in a public announcement, made an offer which people who were suffering, or thought they were suffering, from syphilis might read and properly construe as applicable to themselves as an offer of treatment, surely it could in reason be regarded as an offer to treat for venereal disease. When a man made an offer, as was done in the advertisement in question, stating certain symptoms which were common as indicative of syphilis; of a certain thing which he himself admitted he regarded as the best remedy that he knew of for syphilis, a subject which he stated he had studied for many years; and when, further, he told them in the witness-box that this was the very medicine, the very preparation which he had used to prescribe before it became illegal for him to do so, the point for the jury to consider was whether he had been guilty of prescribing or offering to prescribe for syphilis, and therefore of an offence under the Act. Defendant Shadforth must have known, had he thought at all, that a very large number of people who were suffering from the symptoms he mentioned in the advertisement would, in all probability, think they were suffering from syphilis. The point, therefore, which he put to the jury was "Must the defendant not have known that, in issuing his advertisement, couched in a form which must have led to many people believing they were suffering from syphilis, and that the treatment he offered was the right one?" If the statement made by Wilson to Sergeant Dodd was correct, "they have sold many a gross of boxes" of the article in question. The Deputy-Chairman next directed the attention of the jury to the reference in the advertisement to "Prescription 606." Admitting that it was perfectly true that many people did not know that "606" was the term applied to the German specific for syphilis, he pointed out that the phrasing of the advertisement was such as to lead many to conclude that his remedy was actually the specific discovered or invented by the German scientists. Shadforth's explanation that all his remedies were numbered from one upwards, and that the number "606" as applied to the remedy in question was a mere coincidence, was not convincing, nor was it corroborated by documentary or other evidence. The Deputy-Chairman having quoted cer-tain passages from "Health News," published by Mr. Shadforth, with reference to the monopoly which the Venereal Disease Act gives to medical practitioners (C. & D., July 26, p. 69), went on to say that, having considered all the points in the case, he did not see that the jury could come to any conclusion other than that Mr. Shadforth had been guilty of the offences with which he had been charged.

The jury, after an absence of about twenty minutes, returned a verdict of guilty on all counts against Mr.

Shadforth, of guilty against Mr. Wilson only on those relating to prescribing and treatment, and of not guilty in relation to the advertisement.

Mr. Curtis Bennett remarked that in his summing-up the Deputy-Chairman had made some remarks about documents relating to the numbering of Mr. Shadforth's remedies not having been produced. He thought it right to say that the record book was in Court all the previous day and was in Court at that moment. The documents had not been put in for reasons which his Lordship would quite appreciate.

The Deputy-Chairman replied that the explanation made by Mr. Curtis Bennett was quite admirable in its way. Had he known of and seen the documents he might not have made the remarks he did.

Mr. Rowland Oliver, counsel for the prosecution, stated that the expenses incurred by the Commissioners of Police in instituting proceedings were considerable. They had undertaken the prosecution as a public duty, and he asked the Deputy-Chairman to award costs against Mr. Shadforth.

Mr. Curtis Bennett did not oppose the application, but asked that the costs should be taxed in the ordinary way. So far as the defendants were concerned, all they desired was that there should be a clear and satisfactory ruling, so that offences such as those with which they were charged should not recur in the future. The cases were the first to come before any Quarter Sessions or other Record Court in the country. In view of the excellent character of the defendants he asked his Lordship to deal with them in a way that would meet the merits of the case—by the infliction of a fine and an order to pay the costs of the case.

The Deputy-Chairman, addressing defendants, stated that Mr. Shadforth had been found guilty of a deliberate breach of the law. The cases were the first of their kind which had come before any Quarter Sessions, but he could not regard them in the light in which learned counsel for the defence had asked him. The defendants had been found guilty of a deliberate breach of a law passed for the purpose of combating a grave national danger. Not only as a punishment to themselves, but as a warning to others who might be tempted for the sake of profit to commit similar offences, and also to show that the law was passed for the public beaufit and for the promotion of public health, and that it sould not be ruthlessly disregarded he would send Shadforth to four months' and Wilson to three months' inprisonment. Having in view defendants' position he would order that both terms should be served in the second division. He would also order the defendants to pay the costs of the prosecution, subject to taxation.

Legal Reports.

Camphorated 0il.—At Otley, Yorks, on August 8; Michael Oates, grocer, Pool, was summoned for selling camphorated oil found, on analysis, to consist of 92 parts of mineral oil and 8 parts of camphor. The defence was that the preparation was "obviously" not genuine camphorated oil, but that there was no intention of fraud on the part of the defendant, who had no knowledge of chemistry. The case was dismissed on payment of costs.

What is Cornflour?—At Lambeth Police Court, London, recently, Williamsons, Ltd., 435 Brixton Road, S.W., and G. A. Duncan (trading as T. Potts), 395 Brixton Road, were each fined 5l., with 1l. 1s. costs, for selling as cornflour an article consisting of potato starch. A case was also heard in part against Titus Ward & Co., Ltd., 46 Atlantic Road, S.W., for selling as cornflour an article consisting of rice starch. The contention of the Borough Council was that the public were entitled to have the product of maize starch. Inspector Perrin, giving evidence, stated that, after the purchase had been made, the manager of the shop told him that he had been served with Colman's rice flour. Cross-examined by Sir Archibald Bodkin, the inspector said he could not remember ever having seen wheaten cornflour. He had not known

that Colman's cornflour was made from rice, but was aware that Brown & Polson called their cornflour "Patent," and advertised it as being prepared solely from maize—Indian corn. Mr. A. H. M. Muter, public analyst for Lambeth, said he had always understood that cornflour should be maize starch. Sir Archibald Bodkin reminded the witness that before the Select Committee of the House of Commons, which sat in 1872 to inquire into the question of foods and drugs, six gentlemen of high position dealt with cornflour as made alternatively either of rice or maize—it did not matter which. The Magistrate: I understand the contention of the witness to be that cornflour can only be made of maize. Sir Archibald Bodkin: I am showing that the term cannot be confined to the starch of maize, but that the starch of cereals, sof which rice is one, equally satisfies the term "cornflour," which is just a mere fancy expression. I suggest that the meaning of the word "cornflour" is a floury substance made from corn. The case was adjourned.

New Companies and Company News.

P.C. means Private Company and R.O. Registered Office.

Antoine Chiris, Ltd. (P.C.).—Capital 20,000%. Objects: To carry on the business of perfumers, soapmakers, confectioners, druggists, biscuit and aerated-water makers, etc. R.O., 3 Drapers Gardens, London, E.C.

BURTS, LTD. (P.C.).—Capital 10,000l. Objects: To carry on business as wholesale and retail grocers and Italian warehousemen, chemists, druggists, drysalters, oil and colourmen, etc. R.O., 60 Watling Street, London, E.C.

John Peak & Co., Ltd. (P.C.).—Capital 30,000/. Objects: To take over the business of chemical manufacturers carried on by J. Peak and H. Peak at Bridgewater Chemical Works, Wigan, as "John Peak & Co." R.O. Soho Street, Newtown, Wigan.

ROBERTS' CROUPLINE, LTD. (P.C.).—Capital 15,000/. Objects: To take over the business of a proprietary-medicine manufacturer and wholesale and retail druggist carried on by T. Roberts at Deane Road and Roundcroft Street, Bolton, and elsewhere. R.O., 35 Deane Road, Bolton

Colmans, Ltd. (P.C.).—Capital 2,0001. Objects: To carry on business as chemists, druggists, drysalters, oil and colourmen, etc. The directors are: H. Epstein, 8 Petworth Street, Cheetham, Manchester, pharmacist; Mrs. C. Epstein; and Mrs. M. Kletz. R.O., 19 Brunswick Street, Cheetham, Manchester.

SULPHUS CHEMICAL CO., LTD. (P.C.).—Capital 5,000l. Objects: To acquire from T. B. Greenwood, Manor Works, Eccleshill, Bradford, the benefit of certain existing inventions in relation to the Sulphus ammoniated wool scours, Sulphus soap and disinfectants, Sulphus chemical manures, and Sulphus soda ash, etc. R.O., Manor Works, Eccleshill, Bradford.

Morgan Brothers (Publishers), Ltd. (P.C.).—Capital, 140,000l. Objects: To take over the business of newspaper proprietors carried on by G. Vaughan Morgan and P. Vaughan Morgan, as Morgan Brothers, at 42 Cannon Street, E.C., including the goodwill and copyright of "The Ironmonger" and The Chemist and Druggist. R.O.: 42 Cannon Street, London, E.C. 4.

Poli-Varn, Ltd. (P.C.).—Capital 4,000l. Objects: To take over the business of manufacturers of and dealers in "Poli-varn" boot, furniture, and linoleum polishes, "Scourine," "Scouto" metal polish, soap pastes, and other preparations carried on at St. John's Hill Grove, Battersea, S.W.11. R.O., Rear of 46 St. John's Hill Grove, Battersea, London, S.W. 11.

HEMINGWAY'S CHEMICAL PROCESSES Co., LTD. (P.C.).—Capital 30,000l. Objects: To carry on the business of colour, paint, and varnish manufacturers at Marsh Gate Lane, Stratford; also to carry on the business of chemical and insecticide manufacturers, copperas makers, tin and

other metal recoverers, metallurgists, electric depositors, etc. R.O., 15 Seething Lane, London, E.C.

Macsons, Ltd. (P.C.).—Capital 2,000%. Objects: To acquire the business of a wholesale chemist carried on by A. Wilson, 11 Quay Road, Blyth, and the proprietary rights in registered formulas and in trade-marks held by George Cormack. The first directors are: G. Cormack, 84 High Street, Blyth, chemist; A. Wilson, 11 Barnard Street, Blyth, chemist. R.O., 11 Quay Road, Blyth.

PHILIPPE LETONDU & Co., LTD. (P.C.)—Capital, 8,000/. Objects: To carry on business as manufacturers of and dealers in drugs, chemicals, and anatomical, orthopædic, and surgical instruments, importers, exporters, shipowners, and builders, charterers of ships and other vessels, etc. Agreement with Philippe Letondu. R.O., 3 and 4 Chichester Chambers, Chichester Rents, London, W.C. 2.

Chas. Orme & Co., Ltd. (P.C.).—Capital 16,000l. Objects: To take over the business carried on by C. Harrison, C. Harrison, jun., and H. B. Harrison, as "Chas. Orme & Co., at 36 Holywell Lane, E.C. 2, 29a and 42 Hill Street, S.E. 15, 20 Abingdon Road, W.28, and Kingly Street, W.; and to carry on the business of drysalters, manufacturers of and dealers in polishes, paints, driers, colours, oil, varnishes, distempers, "Ormelines," "Harrell's" products, etc.

North of England Chemical Works, Ltd. (P.C.).—Capital, 35,000l. Objects: To adopt an agreement between J. T. R. Wilson of the one part and A. Darling of the other part for the purpose of acquiring the business carried on at Spittal, Berwick-on-Tweed, as the "North of England Chemical Works," and to carry on the business of chemical manufacturers and merchants, manufacturers of and dealers in nitric, sulphuric, hydrochloric, and other acids, dyewares and chemicals, etc. R.O., North of England Chemical Works, Sandstell Road, Spittal, Berwick-on-Tweed.

DALTIC WHARF CHEMICALS, LTD. (P.C.).—Capital 15,000/. Objects: To acquire from the East Stratford Works, Ltd., the benefit of certain existing inventions in relation to improvements in the manufacture of permanganates, and to carry on the business of chemists, drysalters, oil and colourmen, importers and manufacturers of and dealers in pharmaceutical, medicinal, chemical, industrial, and other preparations and articles, etc.—The first directors are to be appointed as follows: One by the East Stratford Works, Ltd., one by the Saccharin Corporation, Ltd., and one by Speucer, Chapman and Messel, Ltd. R.O., 36 Mark Lane, London, E.C.

Eastern and Russian Trading Co., Ltd. (P.C.).—Capital, 15,000l. Objects: To carry on the business of wholesale and retail exporters and importers, general merchants, buying and selling agents, manufacturers and repairers of and dealers in plant. machinery, tools, apparatus, utensils, and things necessary or useful for any of the above businesses, etc. The subscribers are: Samuel Tolkowsky, 10 Aylestone Avenue, Brondesbury, N.W., merchant; and Mrs. Anna Tolkowsky, same address. The first directors are Samuel and Anna Tolkowsky, Abraham Polany, and Lazar Gildesgame. R.O.: 8 Drapers Gardens, London, E.C. 2.

AJAX ANILINE DYE MANUFACTURING Co., LTD. (P.C.).—Capital 50,000l. Objects: To carry on business as wholesale and retail importers, exporters, manufacturers, grinders and refiners of and dealers in dyes, oils, oleaginous substances, paints, colours, enamels, pigments, glues, gelatines, alkalis, tars, varnishes, cements and smilar substances, etc. Agreement between F. Young and E. A. Gedge, of first part, Pronk, Davis and Rusby. Ltd., of second part, and this company of third part. Directors: F. Young (Chairman), E. I. Pronk, E. A. Gedge, A. E. Davis, L. Collinson, and R. W. Rusby. R.O., 119-120 London Wall, London, E.C.

Companies Dissolved.—Notice is given in the "London Gazette," July 18, that the names of the undermentioned companies have been struck off the register, and such companies are dissolved: Bew's Remedy Co., Ltd.; Empire Direct Aërated Water Co., Ltd.; Kirk's Drug Stores (Consett), Ltd.

Westminster Wisdom.

By the "C. & D." Parliamentary Representative.

THE PARLIAMENTARY ADJOURNMENT.

It is expected that Parliament will rise on August 19 for the summer vacation.

GRANTS TO PANEL DOCTORS AND CHEMISTS.

On August 13. in the House of Commons, Mr. Godfrey Locker-Lampson, M.P., asked the Minister of Health to state the cost in each year of the grants made and promised to panel doctors and chemists in respect of war bonuses and allowances.

EARLY CLOSING BILL.

The Early Closing Association has prepared a Bill which is to be introduced into the House of Commons by Sir Kingsley Wood to make it compulsory for shops to close at 7 P.M. on four nights of the week and at 8 P.M. on Saturday. The Bill also proposes to give power to local authorities to set up advisory committees on early closing.

PATENTS AND DESIGNS BILL.

This Bill was read a third time in the House of Commons on August 8. There was a discussion in regard to monitoring agreements imposed by the owners of patent machinery in the boot trade. It was proposed to insert a new clause to remedy the abuse, but Sir Edward Pollock stated that the Bill already provides means to the end in view. No mention was made of Clause 11, which deals with chemical products and substances intended for food or medicine.

IMPORT RESTRICTIONS ON BOTTLES.

Mr. Wallace, on August 11, asked the President of the Board of Trade whether the import of glass bottles is prohibited; and whether, seeing that this constitutes a direct check on our exports of jam, confectionery, and many other articles, he proposes to take any action in the matter

Mr. Bridgeman replied : The answer to the first part of the question is: The import of glass bottles is restricted to one-half of the imports of 1913. While my right hon friend cannot agree that the suggestion in the second part of the question has substantial toundation, a larger ration of glass bottles will be permitted at an early date.

IMPORTS CONSULTATIVE COMMITTEE.

Captain W. Benn, on August II, asked the President of the Board of Trade whether witnesses before the Imports Consultative Committee gave evidence as to the prices and sources of their supplies to those who were, or might be, their competitors in business?

Mr. Bridgeman replied: If any witness before the Imports Consultative Council gave such information to the members of the Council he did so quite voluntarily, and doubtless with full knowledge of what he was doing.

Captain Benn: Is it the fact that the witnesses before the Committee did in fact give evidence to the members of the Committee who were their trade rivals?

Mr. Bridgeman: They may have done that, for all I

know, but they knew who the members were.

PROFITEERING BILL

This Bill, which is designed to deal with persons making unreasonably large profits on the sale of articles largely used, was read a second time in the House of Commons on August 11. Local tribunals are to be set up to deal with complaints of profiteering. The expenses of these tribunals are estimated at 50,000% for six months. In the course of the discussion Mr. W. J. U. Woolcock made his maiden speech in the House. He spoke in favour of the Bill, but suggested that it might be possible in some cases to limit the rate of profit on a particular article per ton, per thousand or per dozen, as the case may be, which obtained during the pre-war period, plus a percentage with would have to be put on to make up the difference in the purchasing power of the sovereign and the additional cost of labour. This he contended would act as an incentive to increase the quantity of the goods made.

TRADE-MARKS BILL

When this Bill came before a Standing Committee last week reference was made to Clause 6, which deals with the removal from the register of trade-marks used as names of articles. Mr. Hood moved an amendment providing for the omission of the words "a name or." said that in the case of a soap product extensively advertised loss of the name would involve the abandonment of a large amount of advertising material. The Solicitor-General said that the article in question was not patented and was not affected by the clause. The clause was intended to apply chiefly to chemical substances made by the Germans, and he instanced urotropine, which, he said, anybody could make, but the Germans, having got that name, were endeavouring to prevent other persons from using it. Mr. Hood withdrew the amendment. After some minor amendments had been agreed to the Bill was reported to the House. When the Bill came before the House of Commons on August 8 it was read a third time after only a few minutes' discussion.

ENEMY TRADE-MARKS.

Sir F. Hall, on August 6, asked the President of the Board of Trade whether, in a case where a British subject has purchased during the war from the Controller appointed by the Board of Trade under the Trading with the Enemy Act. 1916, all the machinery, material, stock-in-trade, and other moveable assets of a German enemy business, but excluding goodwill and trade-mark rights. and has by means of such purchase since carried on the business and manufactured and sold proprietary articles identified with the business, he is, or will be, liable to any proceedings on the part of the German proprietor of the goodwill and trade-mark in respect of such manufacture and sale!

Sir A. Geddes replied: By Article 297 of the Treaty with Germany every sale of or in connection with an enemy-owned business under Exceptional War Legislation is confirmed, and no claim or action can be brought in respect thereof by the previous proprietor. As regards any use of trade-marks, other than that authorised by the Board of Trade under such legislation, the only protection afforded by the Treaty is that given in Article 309.

CHEMISTS' REMUNERATION.

In reply to a question in the House of Commons on August 7, the Parliamentary Secretary to the Ministry of Munitions said: The question of the salaries paid in national factories to chemists and other technical officers had been under consideration before the memorial was addressed to the Minister of Munitions on November 16, 1918, by the chemists employed at Gretna and other explosive factories, and at about the same time a memorandum was received from the Institute of Chemistry of Great Britain and Ireland which covered the whole ground of the memorial. This letter was communicated to the Government Departments concerned, and finally led to the appointment of a Committee by the Treasury. This Committee is examining, in consultation with the Departments, the question of the salaries to be offered to scientific and technical officers whom it is desired to employ in the Government service. I sincerely regret that owing to pressure of work at the time of the Armistice a reply was not sent to the memorial. I think it right, however, to add that the Explosives Supply Department of the Ministry of Munitions did much during the war to improve the status of chemists employed in industry, and even after making full allowance for the increased cost of living, the scale of salaries paid by the Department can be compared favourably with the salaries paid by private firms under pre-war conditions. At the present the number of chemists employed in the Explosives Department is thirty-five, and owing to the cessation of production this number is being rapidly reduced

IMPORT RESTRICTIONS ON CHEMICALS.

Mr. P. W. Raffan, M.P., on August 14, asked the President of the Board of Trade a number of questions regarding the import restrictions on chemicals, of which the following is a summary: Whether the Licensing Sub-Committee (dyes department) of the Import Restrictions

Department has the power, before granting permission for the importation of medicinal chemicals said to come within their province, to demand the name of the actual manufacturers as well as that of the consignors, and the original invoice, and to levy a charge of 1 per cent. on the invoice, estimated at the rate of exchange at the time of granting permission to import; whether the Department is asking why the requirements of chemical firms for such chemicals as diethyl barbituric acid, methyl sulphonal, and santonin cannot be satisfied in this country, notwithstanding that these chemicals are not manufactured in Great Britain to any appreciable extent; whether the importation of vanillin has been entirely prohibited in spite of the fact that the entire output of British manufacturers has been sold up to the end of September; whether the effect of this prohibition has been to increase the market price of vanillin from 45s. to 80s. per lb.; and whether the Licensing Sub-Committee (dyes department) has the power to prohibit the importation of such chemicals as antipyrin, amidopyrin, and phenacetin, notwithstanding these chemicals are used entirely for medicinal purposes, and are not in any sense intermediary dye products.

B.P. Notes. By "Abel Scholar."

A Creosote Query.

Creosote, according to the B.P., is composed of guaiacol and cresol. Should not this be creosol $C_8H_{10}O_2$, which was formerly named creasol? Is not cresol identical with cresylic acid (so called) and a homologue of phenol with the formula C_7H_7OH ?

Tartaric Acid Test.

Fenton's test for tartaric acid (FeSO₄, H₂O₂ and NaOH) (see official tests B.P. Appendix, p. 496) does not seem to work with such tartrates as rochelle salt, tartar emetic, and some others. Why is this? There is no difficulty or uncertainty when the free acid is used, but in combination it often fails, even when acetic or oxalic acid is used. In such cases to ensure success it is better to prépare the lead tartrate, then collect, wash, and decompose with H₂S, remove excess of H₂S, and proceed as for tartaric acid per Se.

Compound Tincture of Benzoin.

In making compound tincture of benzoin by the centesimal system the preparation is fairly easy, but should a medical practitioner ask how many grains of benzoin are required for each fluid ounce of the preparation, then an awkward calculation is required, based upon this:

 $\frac{100 \times 15.432}{35.2} = 43.84.$

But by calling 15.432 the quantity 15.5 and 35.2 the quantity 35, we get practically 3/7, which, used as the multiplier for the number of grammes, gives quickly and with very little error (about 1 grain short) the number of grains per fluid ounce.

Sal Volatile.

In making sp. am, aromat, no mention is made of the state of comminution of the ammonium carbonate before solution. It is desirable to have it in a fine state of division to expedite solution, and it is often necessary to filter from the small quantity of ferric oxide which is frequently present. It is often suggested that the heating process is to promote chemical action so as to ensure normal ammonium carbonate, but it is more likely intended to ensure rapid solution, seeing that several days and much shaking are necessary to effect perfect solution when the operation is conducted at laboratory temperatures.

Mist. Ammoniacı.

Can the directions for making this preparation be improved? It is found that if the pieces of ammoniacum are cracked under water, there is not the tendency for the resin to leave the gum and form an adhesive plastic mass which is unmanagcable and lost to the final preparation.

If the coarse powder be left in contact with the water for as long as possible, complete disintegration is effected, and a cream-like product is obtained which does not require straining through muslin unless wood and stone are present, which is often the case. These remarks apply also to the other gum-resins, such as myrrh, asafetida, and galbanum.

Tedious Pill Calculations.

The formulas for the official pills are not well conceived. If 5ij. of a pill mass is required, i.e. for 24×5 grain pills, a tedious calculation has to be made, for, in spite of the endcavour to ram down our throats the metric system, the medical profession still adneres to its beloved grains and drachms; but if the quantities were made for 120 parts by weight in place of 100 (or often some inconvenient number, e.g., pillula ferri) how much time would be saved! In this connection why could not the water have been weighed like the rest of the ingredients, including the liquid glucose? When shall we get all the ingredients weighed, as is done on the manufacturing scale?

Indefinite Test for Lead Iodide.

Lead iodide, among the official requirements, should be "entirely soluble in solution of ammonium chloride." This solution is of 10 per cent. strength in distilled water. No mention is made of the quantity of the solid to be mixed with the solution, nor of the quantity of solvent to be used. The temperature by inference would be 15.5° (vide preface to B.P.), and as the rest is indefinite the following experiments were made: One gramme of lead iodide was placed in a 2-oz. corked bottle, and to it was added 1 gramme ammonium chloride and 9.5 c.c. distilled water. Left aside for several days, there was no sign of solution; kept hot (about 80° C.), with cork loosely fitted, after several days there was still no sign of solution, but there was a change of colour—a sign of chemical change, probably the following:

 $PbI_2+2NH_4Cl=PbCl_2+2NH_4I$,

especially when concentration was allowed to proceed. On cooling, some crystals of lead chloride made their appearance. A further addition of 20 c.c. of distilled water gave a yellow precipitate of lead iodide, which, when warmed, did show signs of solution, the precipitate becoming much less voluminous on cooling. The lead iodide was again precipitated, but this time in the familiar form of the crystalline spangles so familiar to the young student in chemistry (and also an interesting example of chemical reversibility). Clearly this particular test wants recasting, or perhaps, which would be the better, deletion from the official book.

Actinic Bottles are Best.

Do we keep our preparations, solid and liquid, in the best manner? In times gone by the white glass flint-stoppered bottle did service for all kinds of medicines chemical and galenical-in spite of the warning which camphorated chalk and chloral hydrate gave us. But, in recent years, we have learnt to regard blue cobalt and amber-coloured glass to be more serviceable and the correct container for many of these preparations. Quite recently a bottle of golden antimony sulphide, which had been exposed to direct sunlight in front of a large window facing west, was found to be bleached nearly white, and it was suspected that it may have been dyed with some synthetic dye, although none could be found. Would it therefore not be better to look into the whole subject and, in more normal times, adopt the suggestion that actinic bottles be used for all these things? The writer is of opinion that tinctures and liquid extracts would not deposit so much, and he is quite certain that fluid magnesia keeps better, i.e. does not crystallise so readily when kept in a blue paper wrapper such as is used, or was, for Dinneford's Fluid Magnesia. Solution of potassium iodide, potassium permanganate and syrup of iodide of iron, Fellows' Syrup and Parrish's Food are similar examples of what is now alluded to. In the chemistrylecture theatre of a well-known university, the bottle containing solution of potassium iodide was painted over with black varnish, which procedure seemed to the writer an excellent plan to preserve this somewhat delicate reagent.

A Pharmaceutical Examiner's Observations.

An Examiner who has had exceptional opportunity of studying candidates for the Qualifying Examination gives helpful advice to them.

It need hardly be stated that the first thing an examiner learns to observe is the more or less strained nervous condition of candidates who present themselves for the Qualifying examination of the Pharmaceutical Society of Great Britain. The symptoms of unusual nervousness are more marked in a practical and oral examination than in a written examination, and it is safe to say that they manifest themselves in a greater or less degree in the case of every candidate. Trembling hands constitute one of the most marked symptoms, and the first care of the examiner who knows his business is to take steps to over-come this drawback to successful practical work. At the outset it becomes necessary to convince the candidates that they will not be watched by the examiner as a cat watches mice, ready to pounce upon them for any slight deviation from imaginary standards of skilful workmanship. It is none too easy to carry this conviction into the minds of candidates, mainly perhaps because of the traditional history prevalent in schools and unwisely disseminated by some teachers; but the thing can be done, and any examiner who fails to do it should write himself down a failure and take early steps to make way for someone more sympathetic. The object of these notes, however, is to convey impressions of examinees rather than examiners, and this can perhaps be done best by dealing with the subjects of the Qualifying examination seriatim.

BOTANY.

This is the subject regarded as being of least importance in the examination, it is one in which candidates are very apt to show weakness and indications of imperfect training, and it is the science subject in which many failures are likely to be reported under the new system of a divided examination unless teachers and students take steps to obviate so deplorable a result. Perhaps teachers are more to be blamed than students for past ill results. Lectures are delivered from too ancient notes, unsuitable text-books are employed, and as a result examiners are surprised at the information conveyed to them. Terminology of the most marvellous character is used in descriptions of plants or parts of plants, and it is frequently evident that the instruction given has been of an unsatisfactory nature, without proper regard to practical demonstrations by the teacher and practical work by the students. What is required is that botany should be studied as a living subject rather than a dead language. Let plants be studied as living beings, and the subject will be endowed with such great interest that failures in botany will be few and far between. Students should not overload their minds with unnecessarily numerous terms and complications in dealing with the classification of plants. It is sufficient that they should be familiar, as the result of handling living specimens, with the most important characteristics of the main divisions of the vegetable kingdom, and be able to refer to its appropriate subclass any plant that may be shown to them. The number of natural orders with which familiarity is required is but few, and it should not be difficult to become expert in describing in technical language flowering plants included in those orders. Let the technical language, however, be acquired from modern rather than ancient text-books. Quite small text-books of botany contain all the information that candidates require, and it is better to be properly conversant with the contents of a clearly written small recent book than to have an imperfect acquaintance with parts of a more bulky volume. As regards the list of plants for recognition, these plants should be compared carefully with we'll-written expert descriptions and pains be taken to comprehend what every statement in those descriptions means. Living specimens should be examined if possible, as well as dried ones. In studying the morphology and

anatomy of plants, let it be understood that the objects aimed at should be ability to distinguish one part of a plant from another, to understand how the different parts are arranged and inter-related, to know how the parts are built up and to be familiar with the different kinds of tissue composing them. The characters of flowers and methods of reproduction are full of interest when studied and explained by the aid of fresh specimens, and should not be dealt with in any other way. Finally, the elementary facts of physiology can only be taught and studied satisfactorily if the most recent text-books are used, and teachers should not hesitate to scrap old lecture notes on this subject, while taking pains to keep more recent ones fully up to date.

CHEMISTRY.

In this subject many candidates fail to satisfy the examiners that their knowledge is sufficiently extensive and precise to justify their registration as chemists and druggists. The trouble is that there appears to be undue anxiety to accumulate a mass of ill-digested facts without a proper grasp of the bearing of those facts as explaining phenomena and reactions which candidates find therefore difficult to explain in a satisfactory manner. Instead. of studying the subjects included in the syllabus in the order in which they are there stated, it is better to make a beginning with the actual substances which the chemist and druggist has to sell and dispense, learn all that ought to be known about them, and become able to recognise them by their physical properties and appropriate tests. Familiarity with the individual substances will be found to facilitate grouping and classification, thus providing a sound basis for such generalisations as are embodied in the various laws and hypotheses of which can-didates are expected to know something. Knowledge of solubilities and other physical properties of chemical substances must necessarily be based upon actual acquaintance with the substances and experimental work done therewith; otherwise what examiners are told by candidates about such points is merely hearsay or matter gleaned from books and often inaccurate or imperfect. A careful study of the usual methods of preparing chemicals helps students to form an idea of the impurities that may occur in those substances, and a practical acquaintance with typical reactions will be found of immense value in explaining incompatibilities in dispensing. The knowledge of so-called. organic chemistry which candidates are required to possess is not extensive, but it is very important that this knowledge should be precise and not merely superficial. Carbon compounds, with the preparation of which gandidates are expected to be familiar, are typical of classes of substances, and what is learned regarding them will be found extremely helpful in explaining facts about many other substances. Chemical arithmetic is a common cause of weakness, mainly because students will not try to comprehend the methods of calculation, but content themselves with using them much as an unskilled workman uses unfamiliar tools. In all calculations it is well to have in mind a clear idea of what the final product ought to be. Candidates sometimes present results which they would never have thought of handing in if they had considered the matter on logical lines, and examiners willing to make every allowance for the natural nervousness due to the excitement of unfamiliar surroundings find it hard to condone faults arising from lack of thought. In the practical chemistry examination weakness of training manifests itself more readily than elsewhere, and candidates should not expect to satisfy the examiners when it is obvious at a glance that they have never used a balance and are unfamiliar with the necessary weights. The whole of the practical work specified in the syllabus should have been done by every candidate, even though examination conditions do not permit of proficiency in all respects being tested and proved. Volumetric work is a frequent cause of trouble, probably for the same reason that candidates are apt to be weak in chemical arithmetic-namely, inability or lack of endeavour to understand what underlies each operation. The remedy for this rests mainly with teachers, some of whom should be at greater pains to explain the principles underlying processes.

PHYSICS.

Though now a separate subject of examination, physics is not yet expanded into the subject it may become in future. All that is required of candidates in this subject was formerly included with chemistry, and it is to be feared that the average candidate's acquaintance with the various items in the syllabus was as slight as was the time the examiners were able to devote to eliciting it. Now, however, there will be ample time to test the candidate's knowledge of physics, so far as it is included in the syllabus, and it may be anticipated that the little candidates are required to know must be known very thoroughly. The fewness of the things that may be asked about will presumably be compensated for by more being asked about them, and both teachers and students will be well advised to approach the subject from the practical side. All the instruments enumerated in the syllabus should be studied directly rather than from book illustrations, and as much experimental work as possible should be done. The determination of specific gravities is of especial importance, and candidates may expect to require much more than the usual hazy ideals on this point. Textbook explanations are frequently unsatisfactory, but students should not find it difficult to grasp the fact that the specific gravity of a substance is simply its weight compared with, or relative to, the weight of an equal volume or bulk of some other substance, usually water. Try to assimilate the idea that the specific gravity of glycerin or of any solid substance is ascertained by determining what weight of the glycerin or solid substance can be got into the same space as a known weight of water, and there should be no further difficulty in the matter. All the different ways of determining specific gravity are based upon replacement of a known weight of water by the substance of which the specific gravity is to be determined, and expressing the result as the relation between the weight of the required quantity of the substance compared with that of the water displaced. Taking water as unity, if 1.26 grammes of glycerin be found to occupy the same space as 1.00 gramme of water, the specific gravity of the glycerin is obviously 1.26.

MATERIA MEDICA.

Recognition of specimens of crude drugs is the most important requirement in the materia medica examination. Candidates are frequently troubled by the fact that the specimens shown are apt to be much finer ones than they have been accustomed to see. The moral of this is that teachers should make provision for letting their students see and handle the best of everything in this respect. Commercial varieties are not always distinguished so readily as they ought to be considering the importance of this from a business point of view. Evidence of the use of rubbishy text-books is not uncommon, and it is to be feared that many students cram tabular statements instead of reading up the subject in a proper manner. Tables of nateria medica are very useful in the right place-towards he completion of the course of training and they are specially useful if they have been compiled by stu-lents themselves. It is not always clear that the syllabus pecifies only "crude drugs mentioned in the British Pharmacopeia or in the annexed list." This does not nclude the fixed and volatile oils mentioned in the Pharnacopœia, nor anything else which is a constituent of a rug. Some teachers and students make needless work or themselves by spending valuable time in imparting or equiring information about many things which are not icluded in the syllabus. Again, though it is required at candidates should be able to name "the chief active instituents of official drugs," nothing is specified in the Ilabus regarding other than active constituents, or rearding any constituents of non-official drugs. ates should not overload their minds with information of iis character, and what it is necessary they should know ight to be acquired from the most recent text-books. ut-of-date books and second-hand editions are responsible r much inaccurate information which candidates submit the examiners. Some schools appear to attach only ght importance to the subject of materia medica, with e result that candidates present themselves with quite

a superficial knowledge of drugs, their origin, sources, mode of formation or method of preparation for the market, and so forth. Such superficial knowledge in one of the most important subjects of the examination is much to be deplored, and should be remedied if satisfactory examination results are desired.

PHARMACY.

Far and away the most important subject of the Qualifying examination is pharmacy, which includes posology and the translation and dispensing of prescriptions. In the practical examination, where candidates are required to make official preparations and dispense medicines from prescriptions, it is remarkable how many show evidence of having been trained to be meticulously careful in nonessential details, while frequently lacking in commonsense applications of principles. Incomplete chemical knowledge leads some to overlook incompatibilities, while imagining others that do not exist. It is often painfully apparent also how some teachers manage to convey to students the impression that they must always be on the look out for pitfalls, due to an imaginary tendency of the examiners to unfairness. Indeed, some teachers seem to know more about the conduct of the examinations than the examiners do, or such is the impression conveyed by candidates when asked to explain why they do certain things in an unexpectedly peculiar manner. Lack of adequate shop training in such a subject as dispensing does not seem to be entirely overcome by school training in that subject, except in rare instances, presumably because the work of tuition in this subject is not always in the best hands possible. It should be understood that the practical work set, for which three hours has hitherto been allowed, could easily be completed in two hours or less by a fairly skilled dispenser. What the examiners expect is that the work should be done expeditiously, as in a pharmacy where the value of time is regarded as being of some importance in estimating profits. This expectation, however, is not often fulfilled, largely because of some undefined feeling that things ought not to be done in a normal way in the examination-room. What an examiner often feels is that he is seeing candidates do things in a manner in which they have never done them before, and as they will never do them in any pharmacy outside of the examination-room. All this leads to waste of time by the candidates, and may be reflected adversely in the examiners' records of results. A knowledge of doses ought often to be better than it is, and candidates would do well to commit official doses to memory more systematically and thoroughly. It is of quite common occurrence for a candidate to state a wrong dose and correct the statement directly afterwards; but the necessary concentration of thought on the matter under consideration should be manifested before the original reply is given. Grave weakness is manifested in making percentage calculations, and more serious attention should be given by students to what is stated in the Preface to the British Pharmacopæia on the subjects of percentages, strengths, fineness of powders, standard drops, and other points of importance. Greater familiarity with the official equivalents of metric and ordinary weights and measures is also much to be desired. Prescription-reading is a subject in which weakness is often shown, and teachers should devote more time to the reading of autograph prescriptions, especially in cases where students have not had the advantage of adequate training in shops where much dispensing is done. In the oral examination in pharmacy proper a wide knowledge of applied physics is required, but not always forthcoming. The nature of solution should be better understood, and the difference between true and colloidal solution; also the applications of the letter in pharmacy. of the latter in pharmacy. Students should practise describing official processes in general terms, as there is too great a tendency to repeat details not desired by the examiner in a parrot-like fashion. For the rest, there is need of a more intelligent understanding of the principles underlying official processes, both processes of manufacture and assay processes. It should be made clear by teachers why an alkali is used at the outset of some assay processes and not in others; also that the object of most-assay processes is simply to liberate the alkaloidal

principles of drugs, and separate them in a pure form so that the quantity, liberated can be determined and the proportion adjusted in the final product. Many fairy tales are recited by candidates who have not been properly informed on various points. Speaking generally, it would appear that insufficient time is devoted to the teaching of pharmacy in schools, students being left to pick up the information as they best can—often from unsatisfactory or incomprehensible books.

Poison Law.

In the last subject of the Qualifying examination there is found another example of what was formerly part of a subject being promoted to a higher dignity. The law a subject being promoted to a higher dignity. relating to the keeping, selling and dispensing of poisons and poisonous substances will henceforth be a separate subject of examination, and a very important one. Candidates ought to know not only what substances are included in the Poisons Schedule, but also which of them are in Part 1 and which in Part 2. While generally well informed as to the procedure to be followed in registering the sale of poisons, they are not always able to describe "minutely" the conditions required by the Pharmacy Act and special Regulations, and greater precision in this respect would be desirable. Sales of poison by wholesale and for export also require more attention, while the conditions under which poisonous substances, as dis-tinguished from scheduled poisons, may be sold should not be overlooked. Sales of arsenic require special attention, and it should be clearly understood why and when medicines dispensed from prescriptions need not have their sale recorded in the book kept for recording the sale of poisons. Much more time will probably be devoted to testing the knowledge of candidates in this subject henceforth.

In the foregoing notes, weaknesses usually manifested by candidates at the Qualifying examiniation have been indicated largely in the form of suggestions to teachers and students for improving present-day methods of teaching and studying. The necessity for such improvement all round will be manifest when it is remembered that it will not be possible in future for candidates to compensate for weakness in one or more subjects by superiority of attainments in other subjects. So far as each of the six subjects is concerned candidates must henceforth stand or fall on their merits as evidenced by their knowledge of the particular subject. In conclusion, it appears desirable to emphasise the necessity of employing the very best text-books available and using the latest editions. Much of the candidates' weakness in certain subjects is un-doubtedly due to the use of inferior or out-of-date textbooks, and the principals of schools where special books are recommended to the students should take serious note of this undoubted fact. Revision of lecture notes may also be called for, even to the extent of entirely replacing them with new matter more in accordance with presentday knowledge. Considering the reliance placed by students on those who guide their studies, it is obviously desirable that every care should be taken to provide them with nothing but the best material in the shape of lectures and books.

Business Changes.

M. ROGERSON & SON, LTD., chemists, Bradford, have disposed of their Harrogate branch to Mr. A. Mortimer, 9 Leeds Road, Harrogate.

Mr. W. Fletcher, chemist and druggist, has purchased the business of Mr. Fuller Smith, chemist and druggist, 10 Tachbrook Street, London, S.W. 1.

Mr. John Timmis, chemist and druggist, 91 High Street, Beckenham, has taken into partnership Mr. E. Severn Kirk, chemist and druggist. The business will be continued under the style of Timmis & Kirk.

Mr. Arad Feather, chemist and druggist, King Street, Twickenham, has joined the directorate of Meggeson & Co., Ltd., Llewellyn Grove. New Church Street, London, S.E. 16, and has disposed of his business to Mr. C. E. A. Goode, chemist and druggist.

Import and Export Regulations

Relaxation of Exports.

Under the terms of a Proclamation published in the "London Gazette" (August 8), the following goods, for which it was previously necessary to obtain an export licence, may now be exported freely without licence: Biscuit meal (for animals); egg, yolk and liquid; rennet powder, rennet extract, and other preparations of rennet.

Italian Import Restrictions.

A new Decree was published in the "Gazzetta Ufficiale" of July 31, to take-effect on August 1, abolishing all previous import restrictions, but instituting a new and extended list of goods for which import licences are necessary. This list includes mineral waters, alcohol and liqueurs, essences and essential oils, fruit syrup, chocolate, mineral-water salts, copper sulphate, sulphite, bisulphite and meta-bisulphite of lime, potash, and soda, acetone, compound medicaments, perfumery and scented soaps, sulphur, linseed, copra, benzine, heavy mineral oil and paraffin, petroleum, mercury, oilseeds, and condensed milk.

Trade with Hungary.

In view of the raising of the blockade, the Board of Trade have issued a General Licence authorising, with certain reservations, the resumption of trade with Hungary. The licence does not remove the existing restrictions upon the payment of debts and the return of property due or deliverable to persons in Hungary in respect of pre-war transactions. Moreover, any permission which may be necessary in respect of any transactions under Defence of the Realm Regulation 41 D must be obtained from the Treasury. The licence does not permit the importation from Hungary of any goods included in the Prohibition of Import Proclamations and not covered by a general licence issued under those Proclamations. Further, export licences must be obtained from the Export Licence Department, 1 Queen Anne's Gate Buildings, Westminster, S.W. 1, before goods included in Lists "A" and "B" of prohibited exports are shipped to those countries. But no licences are now required in respect of goods included in List "c."

Personalities.

In the list of "Birthday" honours which was published on August 13 occurs the name of Mr. J. Y. W. Macallister, Secretary of the Royal Society of Medicine, who receives a knighthood.

CERTIFICATES OF NATURALISATION have been granted to H. Annis (Russian), 165 Bury New Road, Broughton, Manchester, druggist's assistant; L. J. Callender (Russian), 72 Cable Street, St. George's, London, optician's assistant; L. E. Singer (Russian), 84 Kennington Park Road, London, optician.

LIEUTENANT J. C. BARRETT, V.C., son of Mr. J. T. Barrett, Ph.C. (Mathews & Barrett, chemists, Queen's Gardens, London, W. 2), has been presented with the freedom of the Borough of Learnington, together with a gold wristlet watch, in recognition of war services. Prior to his removal to London, Mr. J. T. Barrett was a well-known member of the Learnington Town Council.

MR. A. W. Ball, managing director of Oppenheimer Son & Co., Ltd., manufacturing chemists, Queen Victoris Street, London, E.C. 4, recently gave an interview to the "Evening News" concerning a letter from a Germal in Vienna who wanted to become an agent for Messrs Oppenheimer's products. "I have not and shall no answer the letter," said Mr. Ball, "neither shall I do an business with Germans, but the letter shows how complet is the victory of the British chemist over the German."

NUMOL, LAD., College Street and Ellison Place, Newcastle on-Tyne, have acquired a site at Walker for the erection (a factory.

Births.

COOMBES.—At Parkgate, South Ashford, Kent, on August 4, the wife of L. Wynne Coombes, chemist and druggist, of a son.

EVANS.—At 129 Brighton Street, Seacombe, Wallasey, on August 10, the wife of Robert A. Evans, chemist and druggist, of a son.

Kirby.—At 31 Goldsmith Avenue, Acton, London, W. 3, on August 9, the wife of H. G. Kirby, chemist and druggist (Lieutenant, late 8th Sherwood Foresters), of a son

Marriages.

BENNETT—ELLISON.—At the Wesleyan Church, Weaverham, on August 4, Sidney Bailey Bennett, chemist and druggist, Albert Road, Widnes, to Eliza, second daughter of the late Mr. A. Ellison, Weaverham.

SKUES—MARSH.—At St. Barnabas', Dulwich, on August 11, by the Rev. H. Nixon, Ernest Skues, pharmacist, 221 Upper Tooting Road, London, S.W. 27, to Doris, younger daughter of Mr. John G. Marsh, East Dulwich, S.E.

Deaths.

BATES.—At Oxford Street, Southampton, on August 6, Mr. William Bates, chemist and druggist, managing director of W. Bates & Co., Ltd., chemists, 50 Oxford Street, aged sixty-eight. Mr. Bates, who was a native of Stevenage, went to Southampton as an assistant to the late Mr. Robert Chipperfield. He qualified in 1872, and on the death of Mr. Chipperfield succeeded to the business, which he extended considerably. Three branches were opened, and eventually, in 1899, the business was converted into a limited company. Mr. Bates took an active part in public affairs. He was the first President of the Southampton Pharmacists' Association (which was formed in 1912), and remained in office till 1915. In this position his genial and tactful personality greatly endeared him to his fellow-pharmacists. In addition, he was chairman of the local Pharmaceutical Committee, a member of the Insurance Committee for the borough, and a member of the Southampton Board of Guardians. He was also well known as a Freemason, being a Past Master of the Southampton Lodge and having held office in the Provincial Lodge of Hampshire. Like many keen men of business, he found pleasure in his hobbies; he was a breeder of Great Danes, and had a fine collection of cameos. In the spring of this year, Mr. Bates underwent a serious operation (C. & D., May 31, p. 55) which lowered his vitality and brought about his resignation from the Insurance and Pharmaceutical Committees. The funeral took place at Southampton Cemetery on August 9, when a large number of friends assembled to pay the last tribute. Among the many wreaths was one from the Southampton Pharmacists' Association, which was represented by Mr. W. A. Clark (Vice-President), Mr. W. Martin, Ph.C. (past-President), Mr. F. B. Wride (Secretary), and Mr. H. W. Benest. (The President, Mr. H. Jewell, was absent on account of ill-health.) The Mayor of Southampton and several Masonic friends were also present.

Champion.—At Hastings, on August 5, Mr. James Champion, 17 Park Avenue, Palmer's Green, London, N., a director and secretary of R. Hovenden & Sons, Ltd., 89-95 City Road, London, E.C. 1, aged sixty-three. Mr. Champion entered the service of Messrs. Hovenden in 1875, and on the conversion of the firm into a limited company became assistant-secretary. In 1914 he was appointed secretary, and in 1917 he was elected to a seat on the loard of directors. He leaves a widow. The funeral took place at Old Southgate on August 11.

Howell.—At 15 County Grove, Camberwell, London, S.E. 5, on August 9, Mr. Maurice Howell, Ph.C., aged ninety. Mr. Howell, who passed the Major examination in 1855, was for many years in High Street, Peckham, S.E.

Jones.—At 15 Park Road, Hanley, Staffs, on August 11, Mr. Edmund Jones, J.P., chemist and druggist, aged

sixty-three. Mr. Jones, who was a native of Pontypool, began life as a clerk in the office of a firm of carriers; but, following the wish of his father, he exchanged this calling for that of pharmacy, and was apprenticed with Duncan Flockhart & Co., Edinburgh. In 1877, while still an apprentice, he passed the Minor examination, and soon afterwards became an assistant with John Bell & Co., Oxford Street, London, W. He remained with them about three years, studying in his leisure for the Major examination; but his health broke down, and he went



MR. EDMUND JONES, J P.

to Bournemouth. After a brief engagement with Allen & Hanburys, Plough Court, E.C., Mr. Jones purchased, in 1881, the business of the late Mr. W. Wilson, High Street, Hanley. Seven years later he removed to Miles Bank, where he built up a successful business which he continued personally to manage till his last illness. In 1897 the North Staffordshire Chemists' Association was formed. Mr. John Averill, Ph.C., Stafford, was the first President, and Mr. Jones the Secretary. They held their respective positions for ten years, when Mr. Averill retired, and Mr. Jones became his successor. In the same year (1907) Mr. Jones was elected secretary and treasurer of the Federation of Local Pharmaceutical Associations, and held this position for four years. He subsequently took an active part locally in the administration of the National Insurance Acts, and, during the war, in the work of the local recruiting committee and other bodies. Mr. Jones was a Congregationalist, a Liberal, and a prominent Freemason. As a magistrate he fulfilled his duties with scrupulous care and impartiality. He is survived by a widow.

MIDDLETON.—At Coleraine, on July 23, sudderly, Elizabeth, dearly beloved wife of Mr. J. P. Middleton, Dublin (formerly manager to the late Sir W. J. Baxter).

Nicholson.—In London, recently, of pneumonia, Mr. John Midgley Nicholson (John Nicholson & Sons, Ltd., manufacturing chemists, Hunslet, Leeds). Mr. Nicholson served as a private in the Sportsmen's Battalion during the recent war; he had previously held a commission in the West Riding R.F.A. (T.). He leaves a widow and a son.

RENTOUL.—At 44 Lexham Gardens, London, W. 8, on August 13, Mr. James Alexander Rentoul, K.C., LL.D. D. Rentoul had been Judge of the City of London County Court from 1901 till about a month ago. On the occasion of his retirement (C. & D., July 12, p. 52) we gave some of the mots for which he was noted in legal circles. Before being raised to the Bench he sat in Parliament for some years as a Conservative, and he was also a member of the first London County Council.

SMITH.—At 131 Okehampton Road, Exeter, on August 6. Mr. William Henry Smith, aged sixty-one. Mr. Smith was with Evans, Gadd & Co., Ltd., Fore Street, for forty-four years.

Doctors and the Ministry of Health.—Several speakers at a meeting of the Hearts of Oak Benefit Society, held in London on August 9, expressed their suspicion of the attitude of medical men to the Ministry of Health. One delegate spoke of the "vested interests" of the profession, and emphasised the strength of those interests in the National Insurance scheme. Another urged representatives of insured persons to use their powers to secure adequate representation so that the profession should not "boss" the Ministry.

Trade Notes.

Erasmic Soaps.—The prices of "Peerless" "Elite" Erasmic spaps have been raised to 7d. per tablet, 1s. 9d, per box.

QUININE SALTS .- Some out-of-the-way salts of quinine made by the Cooper Laboratory, Watford, are enumerated in the advertisement in this issue. "

EVANS' PASTILLES.—The supply of Evans' antiseptic throat pastilles will still be somewhat restricted this winter. Chemists are therefore advised to place their orders in good time.

TUBE-CLOSING MACHINE.—An illustration is given in the advertisement of the Banister Street Works, Ltd., 45 High Street, Homerton, London, E. 9, of the "Centrac" collapsible tube-closing machine.

ASPIRIN TABLETS .- A graphic test for good and bad aspirin tablets is given in the advertisement of Howards & Sons, Ltd., Ilford. The company had orders for over two million tablets in the week ending August 2.

WM. BROWNING & Co., Ltd., Albert Works, Park Street, London, N.W. 1, have published a new price-list of medicinal and toilet petroleum, packed goods, specialities, chemicals, and drugs, which should be consulted by keen buyers.

PRICE-LIST.—Lysol, Ltd., Warton Road, Stratford, London, E. 15, send us a copy of a new price-list which they have produced. The list enumerates the various specialities of the company (including lysol, osyl, and Marshall's lysoline hair tonic), and gives the wholesale prices and minimum retail prices.

Sanitas Prices.—Revised prices of Sanitas fluid and Sanitas powder will come into force on September 1. The retail price of Sanitas fluid and powder will be 1s. and 1s, 6d. An announcement regarding trade orders is made in the advertisement in this issue of The "Sanitas Co., Ltd., Limehouse, London, E. 14.

THE ALUMINIUM PLANT AND VESSEL Co., LTD., Point Pleasant, Wandsworth, London, S.W. 18, issue beautifully produced loose-leaf catalogues showing the large variety of aluminium vessels made by the company. The manufacture of these vessels has reached a high standard of excellence, and the metal is much employed in plant for making chemicals and pharmaceutical preparations.

AYRTON, SAUNDERS & Co., Ltd., 34 Hanover Street, Liverpool, are sending out Mr. E. Norman Torry, with a comprehensive set of samples, to South Africa, Australia, and New Zealand. Mr. Torry has made himself a persona grata with many chemists in the Home country, and has attained additional fame as a playwright and a contributor to magazines. He leaves Liverpool at the end of the present month.

"SILVERTOWN" HOT-WATER BOTTLES.—The India-Rubber, Gutta-Percha, and Telegraph Works Co. Ltd., 106 Cannon Street, London, E.C. 4, invite inquiries for prices of the "Silvertown" hot-water bottles. Customer's name is lettered free on all bottles when not less than three dozen assorted sizes are ordered at the same time. There are fourteen sizes, ranging from 8 in. by 6 in. to 16 in. by 12 in., and from 9 oz. to 21 oz. The company. also make india-rubber beds, pillows, and cushions.

EDUCATIONAL INSTITUTIONS.—The following is a list of educational institutions advertising in this issue: Bath and West of England College of Chemistry, Pharmacy, etc.; Battersea Polytechnic; Birmingham and Midland College of Chemistry, Pharmacy, and Botany; Borough Polytechnic Institute; City of London College; Institute of Chemistry, and Chemistry, and Institute of Chemistry, Pharmacy, and Pha Polytechnic Institute; City of London College; Institute of Chemistry of Great Britain and Ireland; Leeds Technical School; Liverpool School of Pharmacy; London College of Pharmacy; London Hospital Medical College and Dental School; Manchester Municipal College of Technology; Royal Veterinary College; School of Pharmacy of the Pharmaceutical Society; South-Western Polytechnic Institute; The South of England College of Pharmacy; University College Hospital Dental School; University of Durham College of Medicine; University of Manchester School of Pharmacy; Westminster College of Pharmacy.

Trade-marks Applied for.

The figures in parentheses refer to the classes in which the marks. are grouped.

· (From "The Trade-marks Journal," July 2, 1919.)

"A.A.F.E. Co," forming device on circle for medicinal

"The Trade-marks Journal," July 2, 1919.)

"A.A.F.E. Co.," forming device on circle for medicinal essences, etc. (3). By the Anglo-American Fruit Essence Co., 12 King Street, Blackburn. 389,680.

"Lockwood's No. 9. Pills" and device of horseshoe ("Lockwood's No. 9. Pills" and device of horseshoe ("Lockwood's No. 9. Pills" disclaimed) for pills (3). By E. Lockwood, 20 Upper Woburn Place, London, W.C. 1. 390,101.

"EULANDL"; for goods (4). By Allen & Hanburys, Ltd., 37 Lombard Street, London, E.C. 5. 391,404.

"Jay-Tee" over picture of jay and letter "L" ("Jay-Tee" and "L" disclaimed); for indiarubber surgical goods (11) and for rubber goods (40). By J. Tompkins, Ltd., 386 City Road, London, E.C. 1. 389,564/5. (Associated.)

"W" on label; for medical glassware, etc. (15). By Wood Bros. Glass Co., Ltd., Pontefract Road, Barnsley. 387,827. (Associated.)

"WORTH CROWING OVER," with picture of crowing cock on gate; for food substances (42). By C. E. Keene, 54 Saxe Coburg Street, Leicester. 386,443.

"F. M."; forming device for all goods (42). By F. Morgan & Co., 6 and 7 Wassail Square, Swansea. 389,452.

"Per-Se"; for food substances (42). By E. A. Scott, 10 North John Street, Liverpool. 399,388.

"Venus"; for mineral waters, etc. (44). By Murphy & Son, Ltd., 2 Dorset Square, London, N.W. 1. 391,084.

"Cymbal," for goods (47); "Anvill" under picture of same for perfumery, etc. (48). By G. W. Goodwin & Son, Ordsall Lane Soap Works, Manchester. 390,402; 391,314.

"Syilkkilos"; for toilet powders (48). By C. E. Fell, Urqu-

391,314.

391,314.

"SYILKILOS"; for toilet powders (48). By C. E. Fell, Urquhart House, High Street, Buntingford, Herts. 389,713.

"CREME MYSTERE" and "JUVEN ETTA"; for skin cream, powder, and lotion (48). By E. Forsander, 43 Oxford Street, London, W. 1. 389,744/5.

"Eonyl": for all goods (48). By J. Bell Hills & Lucas, Ltd., 14 Tower Bridge Road, London, S.E. 1. 390,038.

"Maroxo"; for perfumery, etc. (48). By G. H. Kent, 14 Albert Road, Bournemouth. 390,600. (Associated.)

"Locksurant": for perfumery, etc. (48). By Camwal, Ltd., 112 Pembroke Street, Caledonian Road, London, N. 1. 391,257.

391,257.
"SHABSH": for perfumery, etc. (48). By J. & E. Atkinson, Ltd., 24 Old Bond Street, London, W. 1. 391,304. (Associated.)

Information Department. INFORMATION WANTED.

244/65. Chonning's

244/55. Chonning s sarsupartilla.
245/52. Queen Mary's Old English Lavender Water.
245/52. Dechanel (?) Frères' perfunery, etc.
245/28. "I Jodsal."
8/30. "Royal" soothers with

"Iodosal."
Royal" soothers with the mark "J. S. & S.
London 1830" in circle; makers.
Stephenson's "Car-

250/15. Stephenson's "C tilla" eye shields. 250/9. "Lax-U" chocolates. 249/56. "Eagle" bra vacuum flasks.

247/69. Grippen's Relievers. 247/68. "Barmiraele." 247/68. "Sicilian" soap.

SarsapaOld Engr Water.
Frères'
te.

247/58.

Lers with
L. S. & S. .
250/57.

Mab Wann't ED.

Queen Mab "vaporising lamps; makers.
"Ionie "Spray.
"Armemoel "for malaria, etc. (R. M. & Co., London).

247/58.
Medultra Enema.
250/57.
Medultra Enema.
250/57.
Medultra Enema.
250/57.
"Stretton "health salks" makers.

salts: makers 251/18. Englis English's American Fluid.
251/37. "Getsit" corn cure.
251/38. Thymoglandin.
251/12. Apparatus for producing artificial pneumo-thorax,
in tuberculosis by Forlanin's

process: makers.

INFORMATION SUPPLIED.

Atomizers, 242/57
Ayer's cherry pactoral, 230/46
Barilla soap, 233/16
Bishop's Magnesia, 249/6
"Bismag," 236/15
Blue ointment, 225/54
Geraudel's Pastilles, 242/39
Hennextre (Chabrier), 239/43
Henry's Magnesia, 243/28
Holloway's Pille and Ointment, 243/28
10dolvsin, 239/43 Orthoform, 243/40
Paraffin wax (Egyptian inquiry), 243/32
Paraffin wax (242/64) Paraffinum liquidum, 242/64 Platinum needles, 236/16

Salol, 229/40
"Sanico" toilet rolls, 233/16
Santal Oil, 243/44
Sargol, 241/10
Scott's electric hair-brush cott's electric hair-brush, ZZZ/DS Sesame oil, 211/69 Showcards, 215/33 and 215/70 "Silvoy" 212/74 Smith's potassium compound, 215/30 215/50 Soda carb. exsiceat., 221/47 "Solvaeide." 230/64 Sodium sulphate (Belgian in-quiry), 158/44 "Solac," 55/11 Stone hot-water bottles, 234/65

Observations and Reflections.

By Xrayser II.

The Report of the Great Meeting

and its result reaches me at a little village where I am, six miles from the nearest pharmacy, and have no means of gauging the opinion of the trade with regard to it. I can only speak for myself, and my first thought after receiving the news was "just as I anticipated." I suspected that some trickery would be used, by means of which the real issue would be evaded, and foresaw that the "referendum" would in some way be called into service. Whatever the issue before the meeting may be supposed to have been, the question put in the referendum circular was, "Do you wish to break up the Society, or do you not?" It was made to appear that to vote against the majority was equivalent to such a break-up, and the result was easy to foresee. The vote actually given had very little to do—had, indeed, nothing directly to do—with the by-law, but it was cleverly used to determine the issue ostensibly before the meeting. As for

The Meeting Itself,

I confess I have a difficulty in speaking of it with patience. From beginning to end it was a fraud and a faice. The President's summing-up of his own emotions when the result was made known shows a levity of mind remarkable in a Scotchman and unbecoming in anybody occupying his position: it did not matter to him, as President (he said), "one little jot" which way the decision went; if against him, he should have concluded himself in the wrong; since it was for him he concluded himself in the right; but—well, confessedly, he didn't care—"it did not matter"—which he was. We who differ from him, however, are not so indifferent as to whather we are right or wrong don't like being in whether we are right or wrong; we don't like being in the wrong, and the vote of the meeting puts pharmacists as a body in the wrong, and us with them. We shall not forget how we were tricked into this. It is all very well to say we know how to take a beating, but both Mr. Wolff and Mr. Skinner took theirs too lightly. To be beaten in fair fight is one thing, to be thus beaten is another; and, unless I am greatly mistaken, the resentment of the trade will be deep and lasting.

Mr. Wolff's Speech

stands out from the rest of the proceedings as of vital and perennial importance. It is the most damaging, not to say damning, indictment yet brought against the majority of the Council. I do not refer to his exposure of the untruthfulness of the assertion that he and the other dissentients had been told everything about the by-law that the majority knew, nor to his demonstration of the fact that there is no finality in this by-law; important as these points are, they relate to a controversy now closed, and may be allowed to pass into oblivion; but his implied protest against the distinction between councillors and members of the Society, between public and private meetings of members, is, to repeat a word used above, of perennial importance. The Council has no rights in the Society that are not common to all its members; it represents, more or less perfectly—it would itself claim to do it quite perfectly—and if it does so, then Mr. Wolff's criticism gains greatly in force—it represents, I say, the members composing the Society, but it has no right to dissociate itself from them, to arrogate to itself any special sanctity or peculiar privilege; it acts for us, but it has no justification for distinguishing between member and member, of admitting some to its confidence while it denies this to others. It has,

and for the general policy of the Council rests, been defeated, their resignation might possibly have been justifiable, but it is not so as regards the minority who oppose them. Their business is still to oppose when opposition is necessary, and it is likely to be as necessary as ever. They have been beaten, they may be beaten again, but they will not cease, I am quite sure, to press for progress in pharmacy, and to resist every tendency to reaction. They are—three of them, at least—just as much an "organised opposition" as they have ever been; there is not a true word (though there are many false ones) in the notorious circular that is not true of them still, and they would be false to their election pledges were it otherwise. They represent the mind of a very large section of the Society, and they are bound in honour (if that word, "soiled with all ignoble use," may still be employed without offence) to see that it is effectively represented.

E conomics

are (or is?) two-thirds of politics, and high prices at present as urgently demand the attention of Governments as the balance of power. Our Government is therefore quite right in attempting to stop profiteering, but it may be feared that they are not setting about the task in the right way. Under their scheme, as it has been outlined in the Press, the retailer will be liable to be hauled before his local tribunal by any disgruntled customer who fancies himself to have been overcharged for any article. He will have to prove to this tribunal that he gets no more than a legitimate profit on the article in question by showing what it has cost him, thus shifting the charge on to the wholesaler, who will, in turn, shift it on to the manufacturer, who will have to justify his price by reference to actual cost, which depends upon an infinite variety of complicated facts, including (horresco referens!) the price of labour. The inquisition of Milton's fallen angels into the nature of fate, freewill, and foreknowledge was scarcely more likely than this to find "no end in wandering mazes lost." Meanwhile the retailer will be waiting for his sentence. He can, of course, afford to wait, but there is the complainant to consider too; and the question arises whether it is worth while to undertake such an inquiry until we have some definition of

What Profiteering is?

This the Government sagely declines to give us. The answer is left to the judgment of Messrs. Dogberry and Verges, the tribunal of local wiseacres framed, we may suppose, upon the model of the Parish Council, or, shall we say, of the School Board, now happily defunct? What will happen, I wonder, if I am summoned for charging a private customer 1s. 6d. for a mixture for which, under the National Insurance Act, I should get only $10\frac{1}{2}d$? It might be proved that the latter figure leaves me a "profit" of $33\frac{1}{3}$ per cent., which, to the trade unionist in the chair, would probably seem enough. I may plead my professional status, my education, my responsibilities, and what not, but these are equally relevant to Insurance work. Surely, I shall be in danger of being judged either a knave for charging exorbitantly of being judged either a knave for charging exorbitantly in the one case, or a fool for working at a loss in the other. There is another question behind, but this, I fear, is too recondite even for Mr. Dogberry. What is profit? Is it just a living wage, or something left over when a living is secured? And, if the latter, how much profit is allowable before profiteering begins?

"LARGE CRYST."—Writing to "The Times" on August 1, Mr. E. C. Powell, F.C.S., Bow Bridge Dyes and Chemical Works, gives the following account of results achieved there in the production of the large crystals: "In the course of in the production of the large crystals: "In the course of experiments, which resulted in our producing, on a scale previously unobtainable, sodium permanganate of the requisite standard for the Chemical Warfare section of the Ministry of Munitions during the war, Mr. D. L. Couch, a member of our technical staff, produced crystals of potasium permanganate up to 6 in. in length, and the method colleagues hoped they would be driven into doing so. There is, of course, no reason why they should; had the majority, upon whom the responsibility for this by-law

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THE "SANITAS" CO., Ltd., Limehouse, LONDON, E. 14.

n announcement of particular interest to you appears in this issue on page xxxvii

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PATENTS AND . AADE MARKS.

There are many worrying difficulties to be overcome in connection with the Registration of Trade Marks and the grant of Letters Patent which members of the Retail and Wholesale Drug Trade can avoid by consulting an efficient agent, who would undertake all the trouble for an inclusive fee and obtain protection in the United Kingdom and abroad. Advice in the first instance free. Pamphlets gratis.

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are standardised and therefore always to be relied upon, and official preparations made from them, fulfil all the requirements of the British Pharmacopæia.

Editorial Articles.

Educational Changes.

SINCE our last Educational number there have been important changes affecting pharmaceutical education in Great Britain, and further changes are imminent. The adoption of new by-laws by the Pharmaceutical Society in January of the present year, and their subsequent approval by the Privy Council, opened the way to the imposition of the long-threatened compulsory curriculum (the regulations are now being considered by the Privy Council), and also provided for a much-needed division of the Qualifying examination. The division will take effect after the present month, the first examinations under the new conditions being held in October. For the present, candidates will continue to be examined on the basis of the old examination syllabus, but the subjects will be divided into two groups, and candidates failing to satisfy the examiners in one subject in either group may be permitted to present themselves at a later date for re-examination in that subject only. The first part of the Qualifying examination will include the purely scientific subjects-chemistry, physics, and botany-and candidates must pass in all these subjects before being allowed to present themselves for examination in the more technical subjects—materia medica, pharmacy (including posology and the translation and dispensing of prescriptions), and the law relating to the keeping, sclling, and dispensing of poisons and poisonous substances. Persons registered as apprentices or students on or before December 31, 1919, may take both parts of the Qualifying examination at one time, and will be exempt from any requirements in respect of the proposed compulsory curriculum, provided they pass the Qualifying examination on or before July 1, 1923. Moreover, they will not be compelled to pay a higher fee than ten guineas, so long as they are prepared to take both parts of the examination at one time—i.e. at one and the same meeting of a Board of Examiners. the case of persons who become registered as apprentices or students after December 31, 1919, the fee for the entire examination will be twelve guineas, while anyone proposing to enter for the two parts of the examination at different times will be required to pay a fee of six guineas on each occasion, whether registered as an apprentice or student before or after December 31 of this year. It will thus be seen that the privilege of being permitted to take advantage of the division of the Qualifying examination must be paid for in hard cash, at a cost of two guineas, to be precise. It had been anticipated that division of the examination would be followed at some not remote date by a rearrangement of the syllabus, involving additions of importance in the subject of physics and possible other additions. Such rearrangement, however, would be in the nature of "altered or new regulations," which, before becoming operative, must receive the approval of the Privy Council. The matter has been in suspense, therefore, pending pacification of that body by the adoption of the "unjust by-law" designed to permit the registration of a number of apothecaries" assistants as chemists and druggists without examina-tion. The Regulations which had been put forward for eriticism have now been submitted to the Privy Council, and will probably be approved before the October examination. It is a eurious commentary on the situation that proposals for increasing the stringency of existing arrangements for training and examination should have been dependent upon the admission of certain persons without examination. Moreover, although shop experience is to be definitely required by candidates in the near future, apothecaries' assistants are to be registered without evidence that they have any knowledge of the business. The proposed regulations are also intended to provide that future candidates for examination shall produce to the Registrar evidence satisfactory to the Council of the Pharmaeeutical Society that they have received "sufficient preliminary practical training and have undergone courses of study in the subjects for which they have entered," and this is interpreted so as to compel attendance at courses of instruction in chemistry (minimum of 300 hours), physics (60 hours), and botany (60 hours), subsequent to registration as an apprentice and prior to entering for Part 1 of the Qualifying examination. A further eourse of study (720 hours) following a period of shop training will be required before entering for Part 2 of the examination. Meanwhile, in accordance with another new by-law, persons holding Colonial certificates of qualification have been enabled to become registered in this country as chemists and druggists without further examination, while yet another new by-law permits the Council of the Pharmaceutical Society, with the eonsent of the Privy Council, to exempt persons whose opportunities for training have been affected by war-conditions from the provisions of Regulations requiring evidence of any preliminary training. This has already been very liberally interpreted and applied in a large number of cases of persons desiring to avoid the necessity of passing a Preliminary examination, with the result that more than twelve hundred persons have been registered as apprentices or students on simply paying to the Society a fee of two guineas each. There is, we fear, grave reason for suspicion that the operation of this by-law has been abused by the admission of young girls and elderly men who have not served in the war, but any criticism on this point is met with the retort that the, critic desires to put difficulties in the way of war-worn and disabled men who have earned the right to special consideration. Disabled soldiers and sailors who have had no previous training in pharmacy, but have expressed a desire to adopt it as their future occupation, are being assisted by the Government, provision being made in each such case for exemption from any Preliminary examina-tion and for a year's training at a school of pharmacy,

at the public expense. During this year the student will receive a sustentation allowance, and on the completion of his studies he must pass the first part of the Qualifying examination. He is then to be placed with a pharmacist, who undertakes to pay him a minimum wage of two guineas per week during his period of shop training. After two years thus spent in a pharmacy, the candidate will be permitted to pass the second part of the Qualifying examination, and will then become registered as a chemist and druggist. Grants of money in payment of school fees and as sustentation allowance are also being made to demobilised soldiers who have formerly been engaged in pharmacy—some by the Government, and others from the Pharmaceutical Society's War Auxiliary Benevolent Fund. In all such instances the necessary courses of instruction must be undergone at an approved school of pharmacy. In order to secure proper recognition, it has seemed desirable that all such institutions should be submitted to official inspection before receiving grants on behalf of subsidised students. A further reason for inspection by representatives of the Pharmaceutical Society is provided by the arrangements for the compulsory curriculum, since candidates entering for the Qualifying examination, after the new regulations come into force, will be required to produce evidence of having undergone courses of study at approved institutions, and no school of pharmacy or other educational institution will be placed upon the approved list unless and until it has been inspected and found satisfactory.

New Books on Pharmacy.

All the recently published books on pharmacy seem to be of American origin, this being due to the fact that the pharmaceutical experts of the United States, not being so deeply immersed in the war as were the professors of this country, had time to devote themselves to humanitarian pursuits. It is noticeable, however, that for some years the output of works on pharmacy in America has been growing, and that the number of entirely new books on pharmaceutical subjects produced in the United Kingdom has tended to grow smaller. The publication of a new Pharmacopæia requires the issue of revised editions of pharmaceutical reference books, and the standard works, such as Squire's "Companion" and Martindale's "Extra Pharmacopoia," are examples of the prompt way the demand was met. The same cannot be said of British pharmacy text-books; hence it is that the student often requires to turn to the new books published in the United States. A revised edition of Sadtler's "Text-book of Chemistry intended for the use of Pharmaceutical and Medical Students" has been brought out by Lippincott (21s.). The authors are Dr. Samuel P. Sadtler, Dr. Virgil Coblentz, and Mr. J. Hostmann, Ph.G., who are well known as present or past teachers in American universities. Sadtler's text-book was first published in 1895, and the edition just produced is the fifth. It has been revised in accordance with the ninth edition of the United States Pharmacopoia, but many changes have taken place in the sections devoted to manufacturing, inorganic and organic chemistry, and in that dealing with elementary physics. The book consists of 765 pages, and is a true pharmacentical chemistry work, as the processes of making medicinal chemicals and their employment are in all cases taken as examples. Some chemists object to teaching chemistry thus specialised, but the practice is an oldestablished one which has the advantage to pharmaceutical students of associating chemical processes with articles already familiar in shop life. The book is divided into four parts: (1) Physics. (2) Chemistry of the Non-Metals, (3) Chemistry of the Metals, and (4) Organic Chemistry. Sayre and Havenhill's "Essentials of Pharmacy" (W. B. Saunders Co., 12s. 6d.) is a new work of 495 pages, in which, after 83 pages on pharmacy, there follow orderly chapters on medicinal chemical substances and the pharmaceutical preparations of the United States Pharmacoposia and the National Formulary. There are also tables of solubilities and doses arranged on a new plan, and chapters on incompatibility and toxicology. The authors are professors in the Kansas University. From Chapman

& Hall, Ltd., we receive two books by Dr. Edsel A. Ruddiman, Professor of Pharmacy and Materia Medica in Vanderbilt University. These are "Whys in Pharmacy and Material Proportion!" (8s. 6d.). The "Whys in Pharmacy: Inese are Whys in Fharmacy: (5s.) and "Pharmacy: Theoretical and Practical" (8s. 6d.). The "Whys in Pharmacy" is described as "a compilation of reasons underlying the principles of pharmacy supplemented by a table of equations." The book is written in the form of questions and answers, a style fairly popular in the United States, but seldom employed in this country within recent years. The following are examples picked out at random:

Why is a hen's egg used in acetic turpentine liniment?

To keep the oils and water mixed.

Why must solution of potassium hydroxide be protected from the air? It absorbs carbon dioxide readily.

from the air? It absorbs carbon dioxide readily.
Why do oils of eucalyptus, cajuput, and rosemary resemble
one another in odour? They contain eucalyptol (cineol).
Why are plasmas sometimes better than ointments?
Because they can be washed off with water.
Why is cotton better than filter-paper for filtering a solution of a salicylate? Filter-paper often contains a little iron, which gives a pink or red colour with a salicylate.

The table of equations is designed to show the chemical reactions which take place in making the preparations of the United States Pharmacopcia and the National Formulary. The other book "Pharmacy: Theoretical and Practical," is intended to be used along with the Pharmacopcia, therefore the chapters on practical pharmacopcia, macy are comments on official preparations arranged in groups. The book begins with an arithmetic of pharmacy, and this is followed by a chapter on theoretical pharmacy, the remaining part being devoted to practical pharmacy—i.e., explanations of official preparations. The British student should note that although the books dealt with in this article are modern in every sense, the phar-maceutical examples given are those of the United States Pharmacopæia. A good many of the reasons and explanations given apply, however, to the corresponding preparations of the British Pharmacopæia. The differences between Imperial and American measures should likewise not be forgotten.

The By-law Trick.

THE majority of the Pharmaceutical Council has succeeded in obtaining the confirmation of the unjust by-law although the majority of the members object to it. This paradox has been worked by a political electioneering trick which is far from creditable to its initiators. A so-called "Referendum" circular was sent to all the members—as it only stated one side of the question it was not a proper referendum-containing a scurrilous attack on the minority of the Council and a threat to wreck the Society if the by-law was not confirmed. In these circumstances, it was practically certain that there would be a preponderance of postcards returned expressing approval of the policy of the majority of the Pharmaceutical Council. The postcards issued numbered 9,076 and 6,014 were returned, 4,294 members (a minority of the total membership) placing "Yes" on their cards. The referendum was, however, only a method of obtaining the names of persons in favour of the Council's policy, so that the famous by-law trick could be played as it was pretty certain that the by-law would be defeated at the special general meeting. As the postcards were received they were carefully scrutinised and a list compiled of the names of about five hundred members living in London and the Home Counties. To these or most of them was sent the following telegram:

The by-law question can only be decided legally by Central Hall meeting at Westminster, Wednesday, 3 P.M. Many country members cannot attend owing to distance; essential every London supporter should attend to ensure vote according to referendum, which in both London and country is in favour of the by-law. The majority of the Council ask you to be present and give your support

This had the anticipated effect in bringing to Westminister the "loyal" members pledged to vote for the by-law. There were present one old gentleman who passed his examination in 1855 and another who took the Major in 1865, beside a shoal of what corresponds to

Parliamentary place-men, men who draw or have drawn money from the Society as examiners, etc. They had, of course, a perfect right to be there, but they cannot claim to be representative of the members, as the names were selected with the intention of "packing" the meeting. This is the reason why the by-law was confirmed, although the majority of the members are against the principle of registering unqualified persons as chemists and druggists. The majority of the Council thus stand convicted of trickery, and can no longer be regarded as trustees of the rights of chemists. No wonder the President is so anxious to "let bygones be bygones," but the nasty taste which the Council's "tactics" has left will persist for a long time. The seventeen wreckers must be replaced by men whom the drug-trade can trust, and we hope that the new Progressive Party in Pharmacy will succeed in its endeavour to purify the ranks of the Council at the next election. We place on record the names of the wreckers so that as each Council election comes round the members may "fire out" any of the seventeen who crave to be re-elected. The names which we take from the referendum circular are:

F. E. Bilson
M. E. Buchanan
J. Harcombe Cuff
W. L. Currie
J. W. Deakin
R. Lord-Gifford
Thes. Guthyio Thos. Guthrie Albert Hagon Arthu: H. Jenkin

John Keall
A. R. Melhuish
E. T. Neathercoat
L. Moreton Parry
Philip F. Rowsell
F. Pilkington Sargeant
Edmund White
J. Rymer Young

Some of these will, we believe, retire before their turn comes for execution, but each member of the Society should from this time onward resolve not to tolerate on the Council, longer than is possible, any of the councillors who betrayed pharmacy at the most critical period of its history.

Recognised Institutions.

THE list of institutions to be approved under the Apothecaries' Assistants By-law has now been published by the Pharmaceutical Society. A promise had been given that it would be before the members in time for consideration at the special general meeting on August 6, but this promise was not kept. There are 174 institutions mentioned in the list, ranging from the London Hospital to country provident dispensaries. Each applicant for registration as a chemist and druggist without examination is required to make a statutory declaration as to service in one of the institutions mentioned.

A Drug-trade Strike Threatened.

SEVERAL of the London daily papers have contained references to a strike of employes in the drug and chemical industry to obtain higher wages and shorter hours. We have made inquiries and find that the dispute is between the Drug and Fine Chemical Manufacturers' Association and the Amalgamated Society of Pharmacists, Drug and Chemical Workers, and that the trouble has been caused by procrastination in dealing with the complaints of the workers. The manufacturers association had received the workers' suggestions sympathetically, but had given no definite answer. At a mass meeting held at the Great Assembly Hall, Mile End Road, on August 9, when some two thousand workmen were present, it was announced that the manufacturers were ready to meet the workers' representatives, and that no action would be taken until the result of the negotiations was known. One of the evening papers gave some details as to the pay of the workers in the drug and fine chemical industry, special reference being made to the responsibility of those who handle poisons. It was hinted that if a strike of the workers took place the drug supply of hospitals and chemists' shops would be jeopardised.

DURING the twelve months ended March the imports of drugs, dyes, chemicals, and medicines from Canada amounted in value to \$32,789,000, against \$26,520.000 and \$27,600,000 for the corresponding period of 1918 and 1917.



UCATIONAL FORMATIC



Cearning by study must be won, twas neer entailed from sire to sor

Pharmacy.

Great Britain.

BEGINNING with the October examinations of the Pharmacentical Society of Great Britain, changes in the method of conducting the Qualifying examination will manifest themselves, and those changes may be expected ultimately to extend and alter largely the character of the examination, besides exercising marked influence upon existing methods of pharmaceutical study. The changes are not likely to be very marked at the outset, except that the examination itself will be definitely divided into two parts. Though the syllabus has necessarily been rearranged for the purpose of the divided examination, so far as regards its scope it remains for the present virtually as it has been for many years past. It is important to note, however, that the mere act of dividing the Qualifying examination into two parts involves a certain stiffening of the test imposed upon candidates for registration as chemists and druggists, even in the case of those who may be privileged to take both parts of the examination at one time, because they become registered as apprentices or students on or before December 31, 1919. The reason for this will be apparent when the old conditions and the new are compared and contrasted. Until now the arrangement has been for candidates to present themselves first for examination in (a) practical chemistry and (b) practical pharmacy and dispensing, one or other of these two subjects being taken in the morning and the second in the afternoon of the first day. If a candidate were found weak in both the practical subjects, permission to go forward was withheld; but it was permissible for weakness in one only of these subjects to be compensated for by showing excellence of attainments during the oral examination on the second day. Similarly, it was possible for a candidate who had done well on the first day to show signs of decided weakness in two subjects on the second day; but yet satisfy the examiners as a whole, because able to give entire satisfaction in the remaining subjects. In other words, candidates were able to pass the examination if they attained a passable standard based on an average. Henceforth, however, such a state of affairs will be nonexistent; candidates must definitely secure a "pass" in each of the six subjects of the examination, and there will be no possibility of compensating for weakness in one subject by superior attainments in another. To this extent, therefore, it must be understood that the Qualifying examination will in future be a more severe test of training than formerly. All candidates in October next, whether proposing to take both parts of the examination at one time, or to take them separately, will be required first to satisfy the examiners in chemistry (including practical work), physics, and botany. Unless and until they have definitely passed in these three subjects, they will not be permitted to present themselves for the second part of the examination. If they fail to pass in one only of the subjects, they may with the permission of the examiners present themselves in that subject alone at a subsequent examination, but they must pass in that subject before they are entitled to present themselves for the second part of the Qualifying examination. The subjects of the second part are materia medica, pharmacy (including

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posology and the dispensing of prescriptions), and the law relating to the keeping, selling, and dispensing of poisons and poisonous substances. Here, again, it will be necessary for candidates to satisfy the examiners in the three separate subjects, while if they fail to pass in one subject only they may with the permission of the examiners present themselves for re-examination in that subject alone at a subsequent examination. It follows, therefore, that candidates may pass, fail, or be referred in any of the six subjects, and must pass in the whole six subjects before they are entitled to registration. If they pass in two subjects in either group of three and are referred in the third subject, they may be re-examined in that subject only on a subsequent occasion, but they will not be entitled to this concession if they pass in only one subject of the group.

Entering for the Qualifying Examination.

It is necessary that candidates for the Qualifying examination should previously have been registered as apprentices or students. For this purpose each candidate must submit to the Registrar of the Pharmaceutical Society, 17 Bloomsbury Square, London, W.C. 1, a certificate of having passed an approved Preliminary examination in English, arithmetic, algebra, geometry, and two optional subjects, accompanied by a registration fee of two guineas. The list of certificates which the Registrar is authorised to accept can be obtained free on application to him, and it is to be noted that other certificates than those specified in the list may be submitted for the consideration of the Council of the Society, each such case being considered on its merits. It is further of importance to note that, for the present, applications to be registered as apprentices or students may be entertained from persons who have not passed any preliminary examination. More than twelve hundred such applications have already been entertained, and the applicants have been duly registered as apprentices or students on the ground that they possess a standard of preliminary knowledge to justify the belief that they would be competent, after undergoing the necessary course of training in the subjects of the Qualifying examination, to pass that examination. The benefit of this concession is extended to applicants who can satisfy the Council of the Society that they are reasonably entitled to consideration because of special conditions resulting from the war now happily ended.

PRELIMINARY EXAMINATIONS.

Persons entering pharmacy who are not-eligible for exemption must pass one of the examinations recognised by the Pharmaceutical Society, before they can be registered as apprentices or students. The following are recognised examinations :

UNIVERSITY OF OXFORD. Junior or Senior Local Examinations. Local Examina-Higher tions. Responsions.

University of Cambridge.

Junior or Senior Local Examinations. Examina-Higher Local tions. Previous Examinations.

UNIVERSITY OF LONDON. Matriculation Examination. School - leaving Higher Certificate.

Junior School Examination. Senior School Examination.

UNIVERSITY OF DURHAM. School Certificate Examination. Higher Certificate Examina-

tion. Certificate of Proficiency Examination.

UNIVERSITIES OF MANCHESTER, LEEDS, LIVERPOOL, SHEFFIELD, AND BIRVINGHAM. Joint Matriculation Examination.
School Certificate Examina-

tion. Junior School Examination.

University of Bristol. School Certificate Examination.

Universities of Edinburgh, Aberdeen, Glasgow, and St. Andrews.

Preliminary Examination in Arts, Medicine, or Science. Junior and Senior Local Examinations.

NATIONAL UNIVERSITY OF IRELAND.

Matriculation Examination.

University of Dublin,
Public Entrance Examinations. (For "High
Places.")

ROYAL UNIVERSITY OF IRELAND.

Matriculation Examination.

ROYAL UNIVERSITY OF BELFAST. Matriculation Examination, PHARMACEUTICAL SOCIETY OF IRELAND.

Preliminary Examination.

University of Wales.

Matriculation Examination.

SCOTTISH EDUCATION DEPARTMENT.

The Intermediate Certificate or Passes in the Higher or Lower Grade of the Leaving Certificate Examination.

INTERMEDIATE EDUCATION BOARD FOR IRELAND.

Senior or Middle Grade Certificate Examination.

CENTRAL WELSH BOARD.

Honours, Senior or Junior Certificate Examination.

OXFORD AND CAMBRIDGE SCHOOLS EXAMINATION.

Higher or Lower Certificate Examination.

EDUCATIONAL INSTITUTE OF SCOTLAND.

Medical Preliminary Examination.

Professional Preliminary Examination.

College of Preceptors.

Senior or Junior Certificate
Examination.

The Registrar is not empowered to accept certificates of having passed in the six required subjects at an examination of a legally constituted Examining Body not included in the above list or certificates taken at more than three examinations, but such certificates may be submitted for the consideration of the Council, and each individual case will be considered on its merits.

The required subjects of examination, as stated above, are English, arithmetric, geometry, algebra, and two optional subjects. Latin is no longer obligatory before registration as a student, but we recommend students to take the language at this stage if possible. The six subjects may be taken at not more than three examinations. Where students do not possess certificates of any of the examinations mentioned above they generally enter for

one of the following examinations:

The College of Preceptors, Bloomsbury Square, London, W.C., holds examinations for Senior and Junior certificates four times a year—viz., in March, June, September, and December. Both grades are accepted by the Pharmaceutical Society, provided that the candidates pass in English, arithmetic, algebra, geometry, and two other subjects, of which it is recommended that Latin should be one. The examinations are held in London and at various local centres. Fee (Junior certificate), 20s. and a local fee. The books to be studied in the different subjects vary, but particulars are given in the "Regulations for the Examinations," which will be sent, post free, by Mr. G. Chalmers, Secretary, College of Preceptors. The papers set at the previous examinations are published by Mr. F. Hodgson, 89 Farringdon Street, London, E.C., at 2s., post free.

The Educational Institute of Scotland (Secretary, Mr. H. Cameron, 34 North Bridge, Edinburgh) holds examinations specially for pharmaceutical students in March. July, September, and December. Fee, 1l. for the first examination and 10s. for any subsequent one. The calendar containing the latest regulations and examination papers set during the previous year can be had from Mr. Cameron at the above address, price by post 1s.

Welsh students usually present certificates of the Central Welsh Board. Full particulars regarding these and other a Board of Examiners, if they so choose.

suitable examinations are given in Dodd's "Complete Guide to Preliminary Examinations for Pharmacy, Medicine, Dentistry, Veterinary Surgery, and Science," published by The Chemist and Druggist at 3s. 6d.

In submitting to the Pharmaceutical Society a certificate for registration as an apprentice or student a fee of two guineas must be sent. It is advisable that this be done as early as possible in the pharmaceutical aspirant's career, because for those registered as apprentices or students after December 31, 1919, it is laid down in the new regulations that the curriculum for the first part of the Qualifying examination should be taken subsequent to registration as an apprentice or student.

The Qualifying Examination.

The Board of Examiners for the Qualifying (or Minor) Examination meet in London and Edinburgh in January, April, July, and October, and candidates must give notice and pay the fee to the Registrar in London (Sir William Glyn-Jones, 17 Bloomsbury Square, W.C. 1) on or before the fifteenth day of March, June, September, or December. A certificate of birth must be produced to show that the candidate has attained the full age of twenty-one at the time of giving notice, and a certified declaration that for three years the candidate has been practically engaged in the translating and dis-pensing of prescriptions. The Registrar is authorised, in cases where the candidate has served with the Forces at any time subsequent to July 1914, to deduct from the time required to have been spent in the translating and dispensing of prescriptions a period (not exceeding one year) equivalent to the time which has been served with the Colours. Candidates must pay the examination fee of ten guineas at the time of making application, this being the amount payable for those desirous of taking both parts of the Qualifying examination at one session of the Board of Examiners. Printed forms on which the above declarations are to be made can be obtained free of charge from the Registrar.

The only further point to be noted is that candidates have the choice of London or Edinburgh as their place of examination, and they should express their desire in this respect at the time of giving notice. At different times fancies have prevailed that the conditions of the test were more or less severe at London or Edinburgh, as the case might be; it will have been observed, however, that the proportions of passes and failures fluctuate markedly at both centres at different times, and there is good reason to believe that every possible precaution is taken to maintain an equal standard by the two Boards of Examiners.

Candidates who fail to pass the Qualifying examination may re-enter for the examination on payment of a reduced fee of three guineas; the same fee is payable in any case where a candidate has been permitted by the examiners to re-enter for a single subject only. Where a candidate has failed to attend an examination at the time appointed, a reduced fee of one guinea is payable on re-entering unless the failure to attend was occasioned by unavoidable or proper causes; in that event, a medical certificate or other evidence satisfactory to the Registrar must be produced, and the fee payable is then further reduced to one shilling.

The only difference in the conditions thus far enumerated, applying in the case of candidates who desire to take the Qualifying examination in two parts (i.e., separate sessions of the Board of Examiners), is that, even though registered on or before December 31, 1919, they must pay a fee of six guineas on entering for Part 1, and a second fee of the same amount on entering for Part 2; that is to say, a total of twelve guineas for the entire examination. Every person registered as an apprentice or student after December 31, 1919, must pay the ful. fee of twelve guineas if desirous of taking both parts of the Qualifying examination at one time, but it is highly improbable that anyone will be disposed in future to forgo the undoubted advantage of being able to take the two parts separately, unless there be very exceptional circumstances in the case. Nevertheless, the point remains that it will at all times be permissible for candidates to present themselves for the entire examination at one meeting of

Subjects of Examination.

The syllabus of the Qualifying or Minor examination can be obtained on application to the Registrar of the Pharmaceutical Society, and is also given in "Minor Experiences" (C. & D. Office, 2s. 6d.). The following abstract gives the main features of the syllabus:

BOTANY.—(a) Classification.—The main divisions of the vegetable kingdom—viz., Thallophyta, Bryophyta, Pteridophyta, Gymnosperms, and Angiosperms, and their chief distinguishing features; the classes and sub-classes of the Angiosperms, and the description of flowering plants in technical language. A list of about fifty British plants is given for recognition. (b) Morphology (including Anatomy).—The external forms of plants, homology and analogy; buds, branching and branch systems, leaves and their arrangement. on the stem, the inflorescence, flower, and fruit; a general acquaintance with the anatomy of plants, and recognition of sections by the aid of the microscope. (c) The elementary facts connected with the physiology of plants, and the nature of the chief plant constituents; the manner in which plants grow and the effect of external stimuli upon them; sexual

and asexual reproduction.

CHEMISTRY.—An elementary knowledge of: (a) The chief characteristics of chemical action, the distinction of elements and compounds, laws of chemical combination, valency, etc.; (b) general characters of the non-metals, methods of preparations of the properties of the con-metals, methods of preparations of the properties of the propert tion, etc.; (c) the metals; (d) carbon compounds, with a general knowledge of the methods of estimating carbon, hydrogen, oxygen, and nitrogen in organic formulæ. Practical examination.—Recognition by chemical tests of the more important non-metallic elements and compounds as well as the principal metals and salts. To detect impurities in B.P. chemicals and analyse mixtures containing not more than two metals and two acid radicals. To identify certain organic compounds; and to perform the volumetric determinations which are described in the British Pharmacopæia and the estimations of alkaloids in cinchona, belladonna, ipecacuanha, nux vomica, and morphine in the crude drug and its preparations. To show a practical acquaintance with the methods of preparing ether, chloroform, and some other organic compounds.

Physics.—The laws of the conservation of energy, gravitation, the balance, sp. gr., atmospheric pressure, temperature,

Charles's law, diffusion, vapour densities, etc.

MATERIA MEDICA.-Recognition of the crude drugs of the British Pharmacopæia and in the list given in the syllabus, their botanical and geographical sources, natural orders, commercial varieties, methods of collection and preparation for the market, morphological nature, chief active consti-tuents and their nature and percentage usually present; also a practical knowledge of the pharmacopoial tests and assay processes applied to crude drugs or their official products.

Pharmacy.—(a) General pharmacy, including operations requiring the use of heat, the disintegration of solid substances; the nature of solution, the solvent power of various liquids, and the influence of specified conditions; the processes by which the official preparations are made; and the proportion of active ingredient or crude drug in the more potent of the official preparations; (b) practical pharmacy and dispensing; (c) Latin and prescription reading, posology,

Poison Law.—The sale of poisons and poisonous substances enumerated in the Poisons and Pharmacy Act, 1908, and the conditions imposed by the Pharmacy Act, 1868, and the Arsenic Act, 1851.

Future Examination Conditions.

In accordance with the by-laws adopted by the Pharmaceutical Society in May last, regulations have been made, requiring persons registered as apprentices or students after December 31, 1919 (and those registered on or before that date, who do not pass the Qualifying examination on or before July 1, 1923), to produce to the Registrar, at the time of giving notice to present themselves for examination, evidence satisfactory to the Council that they have received sufficient preliminary practical training and have undergone courses of study in the subjects for which they have entered. The Regulations are expected to become operative in October, when candidates for registration as chemists and druggists will find that they are required to attend systematic courses of study in chemistry, physics, and botany extending over a period of from three to six months prior to entering for Part 1 of the Qualifying examination; while, after passing that and before entering for Part 2 of the examination, they may expect to have to spend two years or more as pupils

to pharmacists in shops kept open for the retailing, dispensing, or compounding of poisons, and to finish their course of training at a school of pharmacy, before being permitted to enter for Part 2 of the Qualifying examination. In this or some similar way the curriculum long desired in certain quarters will ultimately be enforced, and it is important to note that courses of study in chemistry, physics, and botany will be required to be taken subsequent to the registration as an apprentice or student and to precede entry for Part 1 of the examination, while evidence of shop training and of attendance at courses of instruction in materia medica, pharmacy, and poison law will be an essential condition of entry for Part 2. As no age-limit is fixed for the first part of the examination, this may obviously be passed before or during the period of pupilage, but candidates are not likely to enter for it before attaining the age of seventeen or eighteen years. The sooner this intermediate test is out of the way, however, the better will candidates be able to concentrate on the subjects of the Final examination. If the period of pupilage be spread over three years, as is usually the case at present, ample time should be available, with the goodwill and co-operation of employers, for attendance at the necessary classes in chemistry, physics, and botany during that three years; but it is thought to be the better plan to undergo a complete course of study in the scientific subjects and pass Part 1 of the Qualifying examination at the age of eighteen or thereabouts, with not less than two years' shop training to follow. At the termination of the period of pupilage no candidate should need much further tuition in materia medica, pharmacy, and poison law. With more systematic and strenuous training than prevails at present. it follows that the ordeal of examination should cease to have the same terrors which it now unfortunately has for so many pharmaceutical students. It remains to be seen, however, whether the rewards offered by pharmacy as an occupation and a means of livelihood will in future be found commensurate with the extra effort and cost of securing qualification.

The Major Examination.

This examination for the title "pharmaceutical chemist," instituted under the Pharmacy Act, 1852, is open to all candidates who have passed the Minor examination; fee 31. 3s. Examinations are held in April and July only, in Edinburgh and London, and candidates must enter not later than the 15th of the preceding month. The examination extends over three days, and includes chemistry, physics, materia medica and pharmaceutics, and botany of a more advanced type than that of the Minor. The examination is partly written and partly practical. Heat and light, electricity and magnetism, taxonomy, the defection of adulterants in entire and powdered drugs by the microscope, gravimetric analysis, gasometric analysis, alkaloidal assays, and the chemistry of carbon compounds are the chief subjects. The examina-tion should be taken soon after passing the Minor, as the syllabus is largely an extension of Minor work.

Schools of Pharmacy.

Formerly, although the majority of candidates for the Qualifying examination in pharmacy went through courses of study at schools of pharmacy, this was voluntary, and there are many good men qualified as chemists who did not pass through these educational establishments, but trusted entirely to curricula of their own devising. late years, owing to the lack of correspondence between the syllabus requirements and the actual conditions of the examination-room, it has been increasingly necessary to receive the guidance of expert teachers in the subjects of the examination. The by-law imposing a compulsory curriculum will, however, make it necessary that in the near future all candidates must produce certificates of attendance at courses of study in the examination subjects. This requirement applies in future to candidates registered as apprentices or students before December 31, 1919, who desire to take the two parts of the Qualifying examination at separate sittings of the Board of Examiners, and all students registered after December 31

Liverpool School of Pharmacy, 2 Blackburne Place.

Principal: Mr. H. Humphreys Jones, A.I.C., Ph.C., F.C.S., with one qualified assistant and a demonstrator.

The autumn session commences October 6; part-time evening classes are also arranged for Tuesdays and Wednesdays. Part-time students who attend a complete session (October to June) are eligible to compete for a scholarship offered annually.

Manchester College of Pharmacy, 292 Oxford Road.

Principals: Mr. Harry Brindle, Ph.C., F.C.S., Mr. Charles Turner, Ph.C., F.C.S., and Mr. F. Brindle, chemist and druggist.

New terms for the Qualifying examination commence in October, January, and March, extending from six to nine months; fee (six months) 21l., other courses pro rata.

Manchester School of Technology, Sackville Street.

Principal: Mr. J. C. M. Garnett, M.A.

Courses for pharmaceutical students are held on Wednesdays, and extend for two years, with preparation for the Manchester Scholarship. The session begins on October 6.

Manchester University.

The Qualifying and Major courses in the Pharmaceutical Department commence in October and extend for a period of six to nine months, the composition-fees being 21l. and 27l. 6s. respectively. Part-time (afternoon) and evening courses, extending over a period of two years, have also been arranged; fee 14l. 14s., subject to revision. Degree courses in pharmacy are available here, and the equipment is unrivalled by any other pharmaceutical institute. Mr. James Grier, M.Sc., Ph.C., who will be assisted by Miss J. Duncan, chemist and druggist, and another (yet to be appointed), is the pharmacy instructor. A new laboratory with thirty-six extra benches will be ready in October.

Newport (Mon.) Technical Institute.

Principal: Dr. R. W. Holland; Chemistry: Mr. A. Brennar, B.Sc.; Physics: Mr. F. G. Samuel, M.A.

Courses of instruction in subjects required for the Pharmaceutical examinations are obtainable, and there are classes in dispensing conducted by a local pharmacist.

Nottingham University College.

Principal: Mr. W. H. Heaton, M.A.; Chemistry: Professor Kipping, F.R.S., and four assistants. Botany: Professor Carr, M.A.; Physics: Professor Barton, F.R.S.; Pharmacy: Vacant.

Evening courses requiring from four to six hours' attendance per week, and extending from three to four years, preparatory for the Pharmaceutical examinations, cost about 1l. per session. There will also be a full-time day course (nine months) for the Qualifying and Major examinations, fee 21l.

Portsmouth Municipal College.

Principal: Mr. Oliver Freeman, B.Sc.; Head of Chemical Department: Mr. W. H. Watson; Lecturer on Pharmacy: Vacant.

It is hoped to arrange courses for the Qualifying examination of the Pharmaceutical Society and for assistants to apothecaries. There will be separate courses for day and evening students. The fees for day students are 4l. 4s. per term, or 10l. 10s. per session; for separate subjects 5s. per week. For evening classes the fees are 7s. 6d. for the course (September to May), with an extra charge for the summer term.

Salford Royal Technical Institute.

Principal: Mr. B. Prentice, D.Sc.

Classes suited for pharmaceutical students are held.

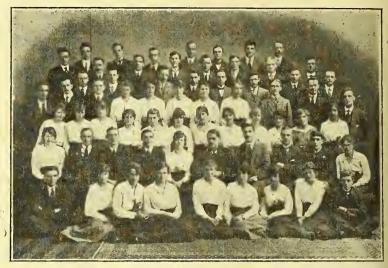


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STUDENTS OF THE LIVERPOOL SCHOOL OF PHARMACY.

Sheffield University.

A nine-months' pharmacy course is being arranged, which it is hoped will commence in October. Local students are advised in the meantime to consult Mr. Herbert Antcliffe, Union Dispensary, West Bar.

Southampton University College.

Complete day courses are arranged for the Qualifying examination. The session commences September 30, fee

Swansea Technical College.

Chemistry: Mr. E. A. Tyler, M.A., F.C.S., and two lecturers; Physics: Mr. J. C. Kirkman, B.Sc., and lecturer; Botany: Mr. L. John, B.Sc.; Pharmacy: Mr. W. T. Sivertsen, chemist and druggist.

W. T. Sivertsen, chemist and druggist.

This is a constituent college of the University of Wales. The session for the pharmaceutical course extends from September to June. Fees 151. 15s.

Wigan Technical College.

Principal: Mr. S., C. Laws, M.A., B.Sc. Head of Chemistry Department: Mr. E. B. Naylor, M.Sc., F.I.C. Lecturers: Mr. E. Taberner, M.Sc., A.I.C., Mr. J. Bradshaw, M.Sc., A.I.C. Lecturer in Pharmaceutics: Mr. T. H. Winstanley, F.C.S. Mathematics: Mr. S. Astle. B.Sc. Physics: Mr. F. Unwin, M.Sc. Botany: Vacant.

The next session begins on September 15. Fees: Parttime course, 1l. 1s.; full time, 6l. 6s. The college calendar gives further particulars.

SCOTLAND.

Robert Gordon's Technical College, Aberdeen.

Chemistry: Mr. W. Maitland, D.Sc., and Mr. S. O. Rawling, B.Sc.; Teacher of the School of Pharmacy: Mr. E. Gower Bryant, Ph.C., F.C.S., assisted by Mr. Harry Berry, Ph.C.

The winter day course of study for the Qualifying examination will open on October 7 and continue until March 1920. A revision course follows, terminating in June. Fee: (October to March) 141. 14s., (October to June) 191. 19s., (April to June) 71. 7s. The evening course occupies four sessions. Fee: First year, 11. 10s.; second year, 21.; third year, 21.; fourth year, 11. Students may then join the revision (day) course at a reduced fee of 51. 5s.

The enrolment for the 1919-20 session is complete, and enrolments for 1920-21 are already nearly equal to the school's capacity.

Dundee Technical College.

Instruction in chemistry and botany is obtainable.

Heriot-Watt College,

Chambers Street, Edinburgh.

Principal: Dr. A. P. Laurie, F.I.C.

Classes are held in subjects required for the Qualifying and Major examinations.

Royal Dispensary and School of Pharmacy of Edinburgh, 21 West Richmond Street, Edinburgh.

Principal: Mr. William Duncan, Ph.C., F.C.S., assisted by Mr. W. G. Mackenzie, Ph.C.

The next session opens in October. Complete courses for the Qualifying examination also begin in January and April; fee 10l. 10s. per term. Evening classes are held on Mondays, Thursdays, and Fridays, commencing October; fee, 3l. 18s., 9d. for three months. Major course (three months) costs 13l. 2s. 6d.

At present the school is full, all benches having been

allotted up to April 1921.

Glasgow School of Pharmacy,

26 India Street.

Principal: Mr. Malcolm M. Irvine, Ph.C., assisted by Mr. Jas. Tulloch, M.A., Mr. J. O. Chisholm, chemist and druggist, Mr. H. W. Thomas, chemist and druggist, and Miss Crawford.

This school has recently been moved to new premises at the above address, and has accommodation for over a hundred students. An advisory committee of local pharmacists assists in the organisation. A nine-months' course begins on October 6, for the Qualifying examina-tion of the Pharmaceutical Society. An evening course extends over two sessions.

Ireland.

Until the Pharmacy Act (Ireland), 1875, the dispensing of medical prescriptions was restricted to apothecaries and medical practitioners. The principal effect of the 1875 Act was to authorise those registered under it to do this dispensing also; further it restricted the sale of poisons to such persons and others who previously had the right. By an amending Act of 1890 the sale of poisons by retail was extended to a class of non-dispensers. Under the 1875 Act the persons registered are pharmaceutical chemists, and under the 1890 Act registered druggists; those who were in business when the Act passed are designated chemists and druggists. A qualification for assistants to pharmaceutical chemists was also created by the 1890 Act, these being entitled to transact the business in the temporary absence of their employers. The examination and registration body is the Pharmaceutical Society of Ireland, 67 Lower Mount Street, Dublin, whose Secretary and Registrar is Mr. A. T. Ferrall.

PRELIMINARY EXAMINATION.

The Pharmaceutical Society of Ireland conducts its own Preliminary examination, but accepts in lieu thereof the certificates of the following examining bodies: The Matriculation or Preliminary examination of the University of Dublin, Public Entrance examination (large certificate); the National University of Ireland, Matriculation examination; the Royal Colleges of Physicians and Surgeons, Ireland, Preliminary examination; the Intermediate Education Board for Ireland, Junior, Middle, or Senior Grade examinations in the following subjects: English, Latin, arithmetic, algebra, geometry, and Greek, or a modern language; or such other examination as shall be deemed by the Pharmaceutical Council as equivalent thereto, all the subjects having been passed at one time. Provided that every certificate accepted shall include Latin as one of its subjects. Any such examination to be passed prior to the statutory service at pharmacy, unless such service has been commenced before January 1, 1907.

The subjects of the Society's Preliminary examination are: Latin, English, arithmetic, algebra, geometry, and either French or German or any modern language. It is held at 67 Lower Mount Street, Dublin, on the first Thursdays and following days in January, April, July, and October, at 10 a.m. A fee of 2l. 2s. must be lodged with the Bank of Ireland to the credit of the Society, and the receipt forwarded to the Registrar (Mr. A. T. Ferrall), 67 Lower Mount Street, Dublin, at least fourteen clear days before the commencement of the examination. The re-examination fee is 1l. 1s.

Pharmaceutical Licence Examination.

The conditions to be fulfilled before entering upon the Pharmaceutical Licence examination are:

(a) After preliminary registration the person must serve four years as apprentice or assistant with, and in the sole employment of; a pharmaceutical chemist, or a chemist and druggist of Great Britain, or an apothecary, or a firm of legally qualified pharmaceutical chemists, chemists and druggists of Great Britain, or apothecaries, in an open shop, and the candidate must spend the business day with his employer. (Provision is made for service with more than one employer, and, for those who have served four years with a chemist and druggist or registered druggist in Ireland, two years' further service with a pharmaceutical chemist on an apothecary suffices.)
(b) Attend three-months' courses of lectures in theoretical

chemistry and in botany and materia medica, and a threemonths' course of practical chemistry (after the lectures in theory) at one or other of the following approved institu-

School of the Pharmaceutical Society of Ireland.

School of the Pharmaceutical Society of Great Britain.

Central Technical Institute, Waterford.
Municipal Technical School, Ballymena. Municipal Technical School, Londonderry. Municipal Technical School, Drogheda. Municipal Technical Institute, Limerick. Central Technical Institute, Limerick.

Cecilia Street School of Medicine, Dublin. City of Dublin Technical Schools.

Government School of Science, South Kensington. Qucen's University, Belfast. Queen's University, Cork. Oueen's University, Galwav. Royal College of Science for Ireland, Dublin.

Royal College of Surgeons in Ireland, Dublin. School of Physic, Trinity College, Dublin. The Anderson College of Medicine, Glasgow.

Royal Academic Institution, Belfast.
The Municipal Technical Institute, Belfast.
Mr. Templeton's School of Scientific Method and

Chemistry, Belfast.
Crawford Municipal Technical Institute, Cork.

Some of these are approved for all the subjects, others for theoretical chemistry only.

(c) The person must be twenty-one years of age.
(d) Declarations and certificates of the foregoing must be lodged with the Registrar when the candidate applies for cutry to the Licence examination.

The examination commences on the second Wednesdays of January, April, July, and October, at 10 A.M., and is held in the Pharmaceutical Society's House, Dublin. Candidates must give notice of intention to attend to the Registrar fourteen clear days before the date of the examination, and this must be accompanied by a receipt of having paid the fee (51. 5s.) into the Bank of Ireland to the credit of the Society. The necessary forms should be procured well in advance. The examination, which is written, practical and oral, is in the following subjects:

BOTANY: Recognition of the principal indigenous plants. used in medicine, their natural orders, and the characters

of their several parts.

MATERIA MEDICA: Recognition of B.P. drugs; their characters, active principles, sources, official preparations, and adulterations.

CHEMISTRY: Elementary laws of chemistry and physics. including equations. Recognition of B.P. chemicals, the processes by which they are obtained, qualitative analysis (including B.P. tests) and volumetric analysis, and a practical examination in these subjects. (The Council recommends Corbyn and Stewart's "Physics and Chemistry.")

PRACTICAL PHARMACY: Translation of Latin prescriptions, detection of dangerous doses, and compounding and dispensing. Processes of making and recognition of B.P. non-chemical preparations, and an intimate knowledge of the Sale of Poisons (Ireland) Act.

Assistants to Pharmaceutical Chemists' Examination.

This examination is also held quarterly, being on the Saturdays following the examination for the Pharmaceu-This permits candidates "referred" at tical Licence. the latter examination to enter for the assistants' examination on payment of a fee of 1l. 1s. New candidates pay in addition a registration-fee of 1l. 1s. The re-examination fee is 1l. 1s. The conditions are similar to those of the Licence examination, but the candidate need not be twenty-one years of age, nor have taken a special course of instruction. The subjects are prescriptionreading and translation, including the detection of unusual doses, practical dispensing, materia medica, pharmacy, including recognition of non-chemical pharmacopæial preparations and a knowledge of the proportions of active ingredients in these, and the laws relating to the sale of poisons in Ireland.

Registered Druggists' Examination.

The subjects of this examination are as prescribed by the 1890 Act-viz.:

English orthography and composition.

Arithmetic and the weights and measures of the British Pharmacopœia.

The appearance and properties of the various drugs and chemicals in general use.

The Sale of Poisons (Ireland) Act.

The examination is open to anyone who has served as an assistant or apprentice for not less than four years to a pharmaceutical chemist, chemist and druggist, registered druggist, or licentiate apothecary keeping open shop, and is held in Dublin and Belfast (if twelve candidates apply) on the second Tuesdays of January, April, July, and October. Applications for admission, accompanied by the necessary declarations of service and a receipt for 4l. 4s. (examination-fee 2l. 2s., and registration-fee 2l. 2s.) placed to the credit of the Society in the Bank of Ireland, must be made to the Registrar at least fourteen days before the dates of the examinations. The re-examination fee is 10s. 6d.

Educational Institutions.

Pharmaceutical Society's Schools, 67 Lower Mount Street, Dublin.

Director: Chemistry School, Professor H. Norminton, Sc. Botany and Materia Medica School, Mr. W. H. M.Sc. Ashmore, Ph.C., and Mr. P. O'Connor, A.R.C.Sci.I. There are three sessions, commencing on the first day in October, January, and April. The fees for courses to meet the Society's regulations are: Theoretical chemistry (three months), 1l. 1s.; practical chemistry (six months), 6l. 6s.; practice course (three months), past students, 2l. 2s.; students of other schools, 3l. 3s.; botany and materia medica (three months), 2l. 2s. The theoretical chemistry class is held on Tuesday and Thursday evenings, and the practical chemistry class on Monday, Wednesday, and Friday evenings. A day class for practical chemistry (three months) begins in April, fee 6l. 6s.; also a day practice course. The botany and materia medica classes are held on Tuesday and Thursday evenings with occasional Saturday demonstrations. The chemistry occasional Saturday demonstrations. (day) course is recognised by the Royal College of Physicians and Surgeons in Ireland. Book prizes are offered for competition each session in each class.

Belfast Municipal Technical Institute.

The Pharmaceutical Section of the Pure and Applied Chemistry Department provides full courses in evening classes, also in pharmacy. Fees, 5s. to 10s. per subject per session. The session commences (day classes) on September 1 and (evening classes) September 15.

School of Scientific Method and Chemistry,

The Gables, Botanic Avenue, Belfast.

Principal: Mr. S. Templeton, Assoc. R.C.S., F.I.C. Day and evening courses, to meet the requirements of the Pharmaceutical Society's Licence examination, begin on September 1. The fee for a full course, which may be taken in one session (seven months) or spread over a longer period, if desired, is 127. 12s., and the fees per subject are: Theoretical chemistry, 27. 2s.; practical chemistry, 6l. 6s.; botany, 2l. 2s.; materia medica, 2l. 2s.; pharmacy, 2l. 2s. Revision courses and classes for the Pharmaceutical Assistants' examination are also held.

Books for Students.

Each college principal has a preference for certain text-books which students are required to use. Some even have their own series specially printed. The following list contains particulars of the most popular text-books for pharmaceutical students:

"Elementary Botany," Edmonds (Longmans), 2s. 6d.
"Toxt-book of Botany," Amy Johnson (Allman), 7s. 6d.
"Structural Botany": Part 1, "Flowering Plants";
Part 2, "Flowerless Plants," D. H. Scott (Black), each

Part 2, Flower and S. 6d.

"Botanists' Pocket Book," Hayward, revised by G. C. Druce (Bell), 4s. 6d.

"Practical Botany for Beginners," Bower and Gwynne-

THEORETICAL CHEMISTRY.

"Elementary Inorganic Chemistry," James Walker (Macmillan), 3s. 6d. (suitable for beginners).
"Text-book of Inorganic Chemistry," Senter (Methuen),

6s. 6d.

Modern Inorganic Chemistry," Mellor (Longmans),

7s. 6d.
"Text-book of Inorganic Chemistry," Newth (Longmans),

"Theoretical Organic Chemistry," Cohen (Macmillan), 6s. PRACTICAL CHEMISTRY.

"Short Manual of Analytical Chemistry," Muter (Bail-

"Qualitative Chemical Analysis, Organic and Inorganic,"

F. Mollwo Perkin (Longmans), 4s.
"Volumetric Analysis," Hampshire (Churchill), 5s.

Pharmaceutical Latin and Prescription-reading. "Latin Grammar of Pharmacy," Joseph Ince (Baillière),

6s. "Medical and Pharmaceutical Latin for Students of Pharmacy and Medicine," R. R. Bennett (Churchill), 6s.

MATERIA MEDICA.

"Materia Medica," Southall, revised by E. W. Mann (Churchill), 7s. 6d.
"Text-book of Materia Medica," Greenish (Churchill), 15s.

PHARMACY.

"British Pharmacopoia" (Constable), 10s. 6d.
"Practical Pharmacy," Lucas (Churchill). 12s. 6d.
"Essentials of Pharmacy," Wootton (London College),

4s. post free.
"Art of Dispensing," MacEwan (C. & D. Office), 8s.

Scholarships and Prizes.

There are several memorial funds in the drug-trade, the interest upon which is awarded to promising students in the form of scholarships or prizes. Some of these have been of great benefit to pharmacy in encouraging students in the early stage of their careers. During the latter stages of the war some of the scholarships were suspended, but these have now been resumed with the exception of the Fairchild scholarships and prizes. In addition to the scholarships enumerated below, there are others of local importance connected with chemists' asso-

ciations or proprietary schools of pharmacy.

THE PHARMACEUTICAL SOCIETY OF IRELAND.—The Council awards annually a gold and a silver medal to pharmaceutical chemists who have during the year passed the Licence examination and obtained the following standard of marks: For the gold medal, not less than 240 marks out of 300, and sixty-five in each of the three subjects; for the silver medal, 230 marks out of 300, and sixty in each

of the three subjects.

DRUGGIST has provided annually for over fifty years exercises in qualitative chemical analyses, for which two book prizes are awarded monthly. A tournament is conducted throughout the winter session, the marks each month being registered, and the three competitors who receive the highest number are awarded parchment certificates and book prizes to the value of 2l. 2s., 1l. 1s., and 10s. 6d. Prizes are also awarded to any student whom the conductor of the "Corner" (Dr. Leonard Dobbin) judges to have made meritorious progress.

Manchester Pharmaceutical Association Scholarship is open to student associates of the Pharmaceutical Society who have been engaged for not less than three years in the pharmacy of a pharmaceutical chemist or a chemist and druggist in Lancashire, Cheshire, or the High Peak Parliamentary Division of Derbyshire. It has an annual value of about 34l., which is spent in paying for school tuition in any provincial school of pharmacy or in the Society's school. The other conditions of entry and competition are similar to those of the Bell Scholarship.

HERBARIUM PRIZES.—The Pharmaceutical Society of Great Britain offers annually to its student-associates a silver medal, a bronze medal, and certificates of honour for a herbarium of British plants collected in any part of the United Kingdom, the Channel Islands, or the Isle of Man between January 1 in one year and July 1 in the year following. No collection may contain more than 150 specimens selected and mounted to display the characteristic features of the more prominent and typical genera of the chief British natural orders. Particulars can be obtained from Sir William Glyn-Jones, 17 Bloomsbury Square; London, W.C.

Jacob Bell Scholarships.—Two scholarships are offered annually by the Pharmaceutical Society of Great Britain as a memorial of Jacob Bell, its originator. 'The award comprises free education at the Society's School and 25l. in cash, with books to the value of 2l. 10s. The scholarships are open only to student-associates of the Society not less than twenty or more than twenty-two years of age who have been engaged for not less than three years in the pharmacy (i.e., open shop) of a pharmaceutical chemist or a chemist and druggist. The examination is held on the third Tuesday in June at London, Edinburgh, and Manchester. Application for admission must be made on or before June 1 to Sir William Glyn-Jones, 17 Bloomsbury Square, London, W.C. The subjects of the examination, which is in writing, are: Latin, French or German, chemistry, pharmacy, and botany.

THE PHARMACEUTICAL SOCIETY OF GREAT BRITAIN offers annually three medals for competition by pharmaceutical chemists who have passed the Major examination during the year. The competitive examination is in materia medica, botany, and chemistry, and is held shortly after the Major examination in April. The Registrar informs each person entitled to compete. The first prize is the Pereira Silver Medal and 5l, worth of books; second, the Society's Silver Medal; and third, the Society's Bronze Medal. The Society also has in its gift the following scholarships:

The Redwood Scholarship, of the value of about 60l. in cash, awarded every second year to a pharmaceutical chemist to pursue work in the Society's research laboratory.

The Burroughs Scholarship of about 50l. every second year

for a similar purpose.

The Charles James Hewlett Memorial Exhibition is of the value of about 151., and is awarded on the recommendation of the Professors of the Pharmaceutical Society's School to the student (other than a Bell scholar) who most distinguishes himself during attendance at the elementary course. The exhibition pays the fees of the successful candidate for the ensuing advanced or Major course.

Apothecaries' Assistants.

By Section V. of the Apothecaries Act 1815 apothecaries are liable to a heavy penalty if they refuse to compound or unfaithfully compound physicians' prescriptions. 'To help the apothecaries in this work of dispensing, Section XVII. enacted that an examination should be instituted for the purpose of granting certificates to persons "to

act as an assistant to any apothecary." The examination is still held, although the candidates are mainly women. The qualification, as shown above, is of a limited nature, but the possibility of obtaining admission to the Register of Chemists and Druggists without examination is likely to increase the popularity of the qualification. The conditions of entrance to the examinations are as follows:

- (a) The candidate (male or female) must be at least nineteen years of age.
- (b) A certificate of sound general education must be produced.
- (c) Λ certificate signed by an apothecary's assistant holding a public appointment, a registered chemist and druggist, or a registered medical practitioner, showing that special instruction in practical pharmacy has been taken for nine months, must be produced.
- (d) The candidate must pass an examination in (1) compounding and dispensing medicines, (2) chemistry, (3) materia medica and pharmacy, and (4) prescription reading.

The examination, which takes place in January, April, July and October, is entirely practical or oral. The examination fee is 5l. 5s., re-examination fee 3l. 3s.—the candidate not being required to be examined in subjects already passed.

Particulars can be obtained from Mr. Frank Haydon, L.R.C.P., Secretary to the Court of Examiners, the Apothecaries' Hall, Blackfriars, London, E.C.

Similar powers to examine and grant certificates to assistants are possessed by the Apothcaries' Hall of Ireland, 40 St. Mary Street, Dublin. Examinations are held on the first Friday of each month except August. The subjects of the examination are pharmaceutical and general chemistry, materia medica, pharmacy (practical and theoretical), antidotes to poisons, and the imperial and metric systems of weights and measures. Candidates must be eighteen years of age, and must submit certificates of (a) age and (b) service of at least one year at pharmacy under the superintendence of a medical practitioner or a pharmaceutical chemist. Notice of intention to attend must be given on the recognised form (obtainable from the Registrar) at least seven days prior to the examination, with the fee of 4l. 4s. (re-examination,

Dispenserships.

Official positions as dispensers or pharmacists are open to qualified chemists in the principal hospitals and dispensaries of the United Kingdom, the tendency being to replace unqualified dispensers by registered persons. There are also dispenserships under Boards of Guardians, the Metropolitan Asylums Board, and the Prison Commissioners. Naval hospitals employ pharmacists for dispensing and store-keeping. The Army has a class of compounders in the Royal Army Medical Corps, and this year (C. & D., January 25, p. 37) put forward a scheme by which pharmacists may attain the rank of staff sergeant. The scheme is, however, not likely to attract pharmacists in peace-time.

Molecular Structure and Flavour.—Tho first observation of the nature of the connection existing between the flavour and the molecular structure of an organic compound was made by Piutti in 1886, who pointed out that while d-asparagine is sweet, its sterco-isomer, l-asparagine, is tasteless. Subsequently numerous observations have been recorded as to the effect of a change in molecular structure on the flavour of the compound. Thus, d-leucine and d-phenylalanine have been found to be sweetish, while their levo-isomers are bitter. The monohydric alcohols are only slightly sweetish, but with increase of the number of hydroxyl groups, as in the glycols, glycerols, etc., the sweetness becomes very marked. On the other hand, the very strong sweet taste of saccharin is destroyed by relatively slight molecular transformations, such as the replacement of an imide hydrogen by a methyl or cthyl group. Barral and Ranc ("Revue Scient.") gave a summary of our present knowledge of the "chemistry of sweet flavours," but they consider that we are yet very far from being able to establish a general law which would enable us to deduce the flavour from the molecular structure of a compound, as there are always exceptions or anomalies, and the known facts are merely approximations.

The Economic Resources of Burma.

V.-Commercial Products.

Now that the war is over it is to be hoped attention will be paid to extending the communications of Burma, which have been sadly neglected by the Government of India since the province came under British rule. No wonder the people, seeing the advance made during the last ten years in the Federated Malay States, so close to their own borders, are thinking they would do better as a Crown Colony, rather than as an appendage to the Government of India, which appropriates so large a portion of their yearly revenues, and gives them so very little in return. There are in Burma at the present time thousands of square miles of forests and jungles yielding nothing to the State, which might be made available for cultivation, and, in a few years would yield a large revenue if there were good communications established between them and the nearest seaport. Everyone agreed, when the Empire was at war, to keep all such matters in abeyance, for it was well known that money was required elsewhere, and that until victory had been secured all other needs must wait. Now that the end has come, and the objects we were fighting for have been attained, the Government of India should make up for its former remissness, or be relieved of Burma altogether. The province is well able to look after itself, and if it was allowed to spend its revenues on its own requirements-of which proper communications are the most important, it would certainly progress just as the Federated Malay States have done. We recently noted Burma's cutch trade and the way the Burma Forest Department has been steadily undermanned for years long preceding the late war. The result has been not only loss of revenue, but the theft and destruc-tion of thousands of cutch and other valuable trees, which would, if properly cared for, have yielded large returns to the State. There are many other valuable fibreproducing trees in Burma, now neglected, but which would, if properly looked after, yield as good a revenue as cutch. Jute grows wild in many parts of Burma. Samples of cultivated jute grown on farms indicate that the warm, moist climate of the Irrawaddy delta is especially favourable for its production. The stems are retted for ten or fifteen days, and the fibre washed in still clear water, and then dried in the sun. The yield is about to Rs.120. Sum hemp grows well in many tracts, but is not extensively cultivated. Its fibre is worth from 12l. to 16l. per ton. It is used for cordage, twine, canvas, and fishing-nets. Hibiscus cannabinus is regularly cultivated in Upper Burma. It is nearly equal to jute, and used for the manufacture of ropes and cordage. An acre yields from 800 to 1,000 lb. of fibre, which fetches from 10% to 12%, per ton. Sisal hemp grown in Upper Burma has been valued at 20%, to 35%, per ton in the London market. It is used for ropes, cordage, carpets, matting, brushes, and paper. Mexican aloes and Mauritius green aloe have been successfully grown in Burma. The fibre of the former has been valued at 201. to 351. per ton, and the fibre of the latter at slightly less. Another fibre, called nagaset by the Burmese, extracted from the leaves of the plant, is finer and weaker than sisal hemp, and is valued at 15l. to 25l. per ton. A wild banana-tree growing in Tenasserim produced hemp valued at the Imperial Institute in May, 1912, at 20l. per ton, with Manila hemp at 22l. In the moist Burma forests this banana-tree might be grown for commercial purposes to any extent. The pineapple is cultivated in Burma for its fruit, and when in season 200 can be bought for a Elsewhere pineapple-leaves yield a fibre which can be woven into fabrics resembling silk. In Burma this seems hardly to be known. The fertile soil of this wonderful province would prove a mine of wealth if it was properly looked after. Like the richest gold-mine, if you do nothing to it and neglect it, it will produce no return. Tenasserim has been a British possession for

close on a hundred years. Before the war, outside of its four or five towns it had just eight miles of metalled roads, and was without a railway. Since then matters have slightly improved, mainly on account of the war and the British demand for wolfram. It is now joined by rail to Rangoon, and hopes are entertained that a railway will shortly be opened between Moulmein and Tavoy. The latter district produces about three-fourths of the whole world's supply of wolfram, besides tin and other minerals. Fully three-fourths of the Tavoy district have never been explored. Burma's climate, though malarious in parts at certain seasons of the year, seems well suited to Europeans who live temperate lives. Either the Government of India should spend the revenue obtained from Burma in giving it proper communications, or the province should be made into a Crown Colony like the Federated Malay States, with a Government of its own. If the latter was done, Burma's progress in the next decade would probably exceed her advances under the Government of India during the thirty-four to ninety years she has been attached to it, and had her taxation spent in India on matters with which she had no more concern than British subjects in the United Kingdom. serim, the division which has been longest under British rule, has been the greatest sufferer from neglect of all the other portions. Mandalay, which was annexed in 1835-86, has been far more liberally treated in the matter of communications than the older province, a railway having been opened between it and Rangoon within a few years of its coming under the British flag.

A Belgian Pharmaceutical Patriot.

Antwerp is justly proud of one of her pharmacists, M. Victor Van Damme, who suffered eight hundred days' imprisonment, with hard labour, in Germany for his patriotism. As the pharmacist who had the supply of medicines to the railway employés, he was in a position to collect valuable information regarding the doings of the German troops, in which he was assisted by an Alsatian soldier, Eugène Thomas, attached to the Telegraph Service. He found means of communicating information received to friends in Holland, such facts as details concerning the preparations made for the Verdun offensive in 1916; that a considerable amount of dynamite was stored in the castle of Von der Sachsen, where a main telegraph station connecting all the forts had been erected; that Fort 8, as well as the training-ground of Maria ter Heide, was plentifully garnished with wooden guns; he also reported the presence of the Crown Prince's staff at Stenay, and how the Crown Prince was wont to go out at night, accompanied by half-a-dozen white dogs. One day he received the visit of a French soldier, accompanied by a French aviator, both stated that they had been tended and hidden by people at Charleroi, and now desired to escape into Holland. As the aviator's story seemed rather suspicious, Van Damme made a few vague promises, and found them a hiding-place. Soon his suspicions were allayed, and the aviator became even a contributor to the clandestine newspaper published with Van Damme's assistance. However, on September 13, 1916, at 9.30 P.M., Van Damme was arrested by five officials of the German secret police, led by the "aviator," who was none other than a traitor, a native of Albert. The same night M. Van der Voort, a banker who conveyed the information obtained to Holland, was arrested on his return from Charleroi, where he had gone to make inquiries on Van Damme's behalf regarding the story told by his two unexpected guests. After seven months' imprisonment the Germans failed to obtain further particulars of Van Damme's activities, or to discover other persons associated with him in this work. On April 18, 1917, Van Damme was sentenced to eleven years' imprisonment with hard labour, Van der Voort to twelve years, and the Alsatian soldier who had assisted them, thanks to their united efforts to exculpate him of all complicity in their doings, escaped being shot, and was sentenced to eight years' imprisonment in a fortress. Now all have returned to their homes.

Trade Report.

42 Cannon Street, E.C. 4, Aug. 14, 3 p.m.

Business in chemicals and drugs has been distinctly quiet this week, and with the unsettled conditions in the industrial situation there is little inducement at the moment to make fresh commitments. Trading with the United States so far as pharmaceutical chemicals is concerned is at a low ebb owing to the mability to obtain licences or the cutting down of quantities. The Import Restrictions Department has been "snowed under" with applications, and considerable delay exists before decisions are made. The future trade policy of the Government is to be announced by the Prime Minister next week, after which the commercial community will be better able to judge the situation, but it may be taken for granted that import restrictions on many chemicals will There have been few changes in values this week. Potash bromide is in good inquiry and firm; salicylates are also firm owing to the rise in carbolic acid. Milk-sugar is dearer. Creosote ex beechwood, amidopyrin, sulphonal, and methyl sulphonal are cheaper. Vanillin is lower owing to a large arrival, which is to be released. Among essential oils, lemon, bergamot, tangerine, and orange are on a higher level; clove is also dearer; oil of Japan mint and French otto are easier. Other changes include rather lower prices for chamomiles and areca. Castor oil is again higher, and linseed and turpentine oils are cheaper. Shellao has had another sensational advance. The rise in the rupee from 1s. 8d. to 1s. 10d. consequent on the advance in silver means a corresponding increase in the cost of imports from India, and is likely to have a restrictive effect on shipments from that source: on the other hand, it should stimulate exports from this country to India.

Higher	Firmer	Easier	Lower
Antimony Arsenic Carbolic acid Castor oil Clove oil Coumarin Lemon oil Milk-sugar Orange oil (Sic.) Shellac Wood oil (Ch.)	Bergåmot oil Camphor oil Galls (Chinese) Heliotropin Thymol	Areca Caraway-seed Farina Linseed oil Mint oil (Jp. dementh.) Wax vegetable (Jap.)	Amidopyrin Chamomiles Creosote, ex beechwood Dill-seed Methyl sulphonal Sulphonal Turpentine Vanillin

Cablegram.

New York, August 14.—Business is fair. Acetanilide has advanced to 39c. per lb. Mexican sarsaparilla is also dearer at 46c., hydrastis has advanced to \$5.50, and jalap to 65c. per lb.

AGAR-AGAR is quiet, with spot sellers of No. 1 Kobe strip at 2s. 11d. per lb., and No. 2 Yokohama at 2s. 6d. The exports from Japan during May amounted to 162,055 kin, valued at 233,902 yen. During the five months ended May 31 they were as follows:

_	1917	1918	1919
To	Kin	Kin	Kin
China	488,371	133,086	247,600
Hong-Kong	206,658	110,920	219,661
Straits Settlements	63,229	37,405	62,851
Dutch Indies	119,350	121,358	162,115
Asiatic Russia	434	62	415
Great Britain	55,472	1,222,239	33,010
France	46,400		
United States	150,414	67,366	45,712
Other Countries	116,432	88,289	89,585
Kin	1,246,760	1,780,725	860.979
Yen	1,133,493	1.881.490	1 122 943

ALOES.—The exports from the Union of South Africa during April amounted to 41,579 lb. (4101.), against 1,566 lb. (181.) in April 1918. During the four months (January-April) the exports were 496,606 lb. (5,1521.), against 155,150 lb. (1,3301.) for the corresponding period of 1918. AMIDOPYRIN is cheaper at 50s. pcr lb. on the spot. ANISE is steady, with business doing in Spanish on the spot at 80s. per cwt.

ANISE OIL, STAR, is very quiet at from 5s. 6d. to 5s. 41d. per lb. for "Red Ship" brand, and to arrive 5s. 3d. c.i.f. is quoted.

Antimony.—The price of home controlled refined regulus has been raised 2*l*. per ton to 42*l*. The fact is interesting that Chinese producers have made notable sales for shipthat Chinese producers have made notable sales for ship-ment to Northern European ports, chiefly Denmark and Norway, the final destination of which is probably to be Germany. While Japan continues to be a fairly active buyer of most metals from abroad, she is at present not offering antimony to this side.

ARECA.—Further arrivals have taken place from Ceylon, and the spot price is easier at 90s. per cwt.

ASPIRIN is unchanged but firm at 4s. 6d. per lb. for spot sumplies.

supplies.

BERGAMOT OIL has had a slight advance in Sicily, to arrive offering at 18s. to 18s. 6d. per lb. c.i.f., the spot value being

Browides.—There is a large inquiry for potash, and probably owing to the unsettled feeling generally in regard. to chemicals, importers seem to have hesitated in bringing forward fresh supplies. Consequently the stock has been allowed to gradually dwindle, and the market is firm on the basis of 3s. 6d. for crystals and 3s. 3d. for granular. Ammon. is 2s. 11d. to 3s., and soda 2s. 7d. to 2s. 8d. per lb.

Buchus.—The exports from the Union of South Africa during April 1919 amounted to 4,453 lb. (1,003/.), against 11,331 lb. (2,047/.) in April 1918. During the four months (January-April 1919) the exports were 68,479 lb. (13,856/.) against 59,683 lb. (9,871/.) for the corresponding period of

CALCIUM LACTATE is offered at 8s. 6d. per lb. on the spot. CALUMBA.—The deliveries during July amounted to 176 bags and the landings to 783 bags. The stock on July 31 amounted to 2,180 bags and the deliveries to 238 bags.

CAMPHOR (REFINED) is dull, the spot value of Japanese 2½-lb. slabs being 13s. 9d. per lb. The exports from Japan during May amounted to 114,225 kin, valued at 408,634 yen. During the five months ended May 31 they were as follows:

.919
Kin \
3,681
5,510
2,563
3,813
0,470
1,633
625
7,295
6,746

CAMPHOR OIL is rather firmer, holders asking 120s. per cwt, for essential white Japanese. The exports from Japanes during May amounted to 1,892 kin, valued at 678 yen. During the five months ended May 31 they were as follows:

			1917	1918	1919
Kin	•••	***	742,216	300,616	196,695
Yen			130,664	59,552	51,019

CANARY-SEED.—A fair trade is passing at 175s. per quarter for good Morocco on the spot. Inferior quality can be bought at 165s. to 172s. 6d.

CARAWAY-SEED is easier at 107s. 6d. per cwt. for Dutch and

90s. for North African.

CARBOLIC ACID.—Makers are asking the advanced rate of 9d. per lb. for 39° to 40°C, ice crystals in large bulk packing.

CARDAMOMS.—The exports from Ceylon during the period January 1 to June 30 were as follows:

1916	1917	1918	1919
lb.	lb.	lb.	lb.
299,129	153,063	220,602	233,798

The U.K. received 150,621 lb. (1918, 1,797 lb.); U.S.A., 50,719 lb. (1918, 47,489 lb.); India, 4,623 lb. (1918, 161,273 lb.); Egypt, 7,330 lb. (1918, 7,255 lb.); and Norway, 19,800 lb. (1918, nil).

CASCARA SAGRADA.—Spot sales of two- to three-year red have been made at 115s. per cwt. From 80 to 90 per cent. of this year's peeling is in the hands of one firm in the

of this year's peeling is in the hands of one firm in the U.S. The deliveries during July amounted to four tons and the landings nil; the London stock at the end of July was 47 tons, against 28 tons in July 1918.

Cassia Fistula.—About 40 packages have arrived from the Continent, part of which has been sold at 170s. per cwt. Castor Oil is 2l. per ton higher at 106l. for pharmaceutical, 103l. for first pressing, and 101l. for second pressing net, barrels included, ex works Hull.

Chamomiles.—New crop Belgian are expected to be available in a few days, sellers offering at the rather lower price of 160s. per cwt., and for old crop 180s. is wanted. The weather has been favourable for the crop.

CINCHONA.—The exports from Java have been as follows:

		April 1919	JanApril 1919
		Kilos.	Kilos.
•••		393,000	1,300,000
		156,000	856,000
		20,000	140,000
•••	•••	_	69,000
		569,000	2,365,000
	•••		393,000 156,000 20,000

CITRIC ACID is quiet at 4s. 4d. per lb. on the spot, CLOVE OIL is dearer at 14s. 6d. per lb. from distillers. CLOVES have been firm, with spot sellers of fair Zanzibar

at 1s. 8d. per lb.
COCA-LEAVES.—The exports from Java during the three months, January-March 1918 and 1919, were as follows:

				1918	1919
To				Kılos.	Kilos.
Netherland	ls	***	***	_	39,396
U.S.A.			•••	35,325	72,792
Japan	•••	• • •	• • •	12,552	_
				47,877	112,188

COD-LIVER OIL.—Our Bergen correspondent writes August 8 that "there is a good demand for unrefined codliver oil, and prices have advanced something like 20s. to 25s. per barrel. A regular market quotation for refined oil cannot yet be given. The total exports to the end of July 1919 amount to 16,000 barrels, whereof 600 barrels were during the last week of this period.

CORIANDER-SEED continues to be neglected; quotations are nominal at 24s. to 27s. 6d. per cwt., according to quality. COUMARIN.—Spot holders are now asking 65s. per lb.—an advance of 10s. on last week's quotation.

CREOSOTE (BEECHWOOD) is lower at from 7s. 6d. to 8s. per lb., according to packing.

CUMIN-SEED continues firm, with further business at 50s. to 52s. per cwt. according to quantity.

to 52s. per cwt., according to quantity.

DILL-SLED.—There is little or no demand at present, and the quotation is nominal at 27s. 6d. per cwt. ERGOT.—An arrival of 10 bags Spanish has taken place at Hull.

FARINA is quiet and a trifle easier, No. 1 Japaneso offering at 48s. 6d. per cwt. and afloat at 46s. 9d. to 47s. c.i.f. Sweet-

potato flour is steady at 43s. Fennel-seed remains steady at about 37s. 6d. per cwt. Fenugreek-seed is slow of sale at 21s. to 21s. 6d. per cwt.

for retail lots of Morocco on the spot. GENILAN is quiet, with small sales at about 55s. per cwt. on the spot.

Hellotreofin.—Spot holders ask 25s. per lb. for crystals. Нем-уодк is quiet, Chinese liquid hen (2 per cent. boric acid) offering at 215s. per cwt. on the spot, and afloat at 195s. Dried whole on the spot is 3s. 3d. and afloat 3s. c.i.f.; spot sellers of Dried yolk quote 2s. 4d., and July-September shipment 2s. 3d. per lb. c.i.f. Imports of eggyolk and liquid and albumen during July amounted in value to 767,978l., against 99,095l. in July 1918; for the seven months ended July 31, 1918, the imports were valued at 4,313,623l., against 1,048,724l.

Jecacuanha.—Tho deliveries during July amounted to 39 Matto Grosso, 17 East Indian, and 1 Cartagena, the landings being 15 Matto Grosso and 23 Minas. The London stock on July 31: 141 Matto Grosso, 26 Minas, 10 Cartagena, and 47 East Indian, a total of 224 packages, compared with a total of 722 packages at the corresponding period of last year. The Maldonado from Monte Video has brought 79 hales to Liverpool of last year. The Male 79 bales to Liverpool.

LEMON OIL is dearer, sellers in Sicily asking up to 5s. 4d. per lb. c.i.f., and on the spot from 5s. to 5s. 2d. will still bиу.

LINSEED OIL is about 7s. lower at 111s. per cwt. naked on the spot.

MANDARIN OIL is extremely scarce in Sicily, and the price has advanced to 40s. to 45s. per lb. c.i.f. for pure.

MENTHOL is quiet, with spot sellers of Kobayashi-Suzuki at 35s. per lb. The exports from Japan during May amounted to 38,453 kin, valued at 437,555 yen. During the five months ended May 31 they were as follows:

	1917	1918	1919
To	Kin	Kin	Kin
British India	4.424	8.933	3 554
Great Britain	16,110	77,414	17,182
France	1.361	675	225
United States	95.241	34.701	89.659
Other Countries	6,087	5,848	3,046
Kin	123,226	127,571	113.666
Yen	800,607	752,113	1,068,896

MILK-SUGAR. - Dutch powdor shows an advance of 15s. per

MIRK-SUGAR.—Dutch powdor shows an advance of 10s, percept, to 225s, in cases, and slightly less for round lots. It is said the British Government is now holding for 2s. 3d. per lb. (252s. per cwt.), and this for at least tou lots. MIRN OIL is quiet, with spot sales of Japanese dementholised (Kobayashi-Suzuki) at 7s. 4½d. per lb., and to arrive 7s. 3d. c.i.f. is quoted. The exports from Japan during May amounted to 59,621 kin, valued at 163,282 yen. During the five months ended May 31 the exports were:

ORANGE OIL is dearer in Sicily owing to the resumption of buying by Austria; 13s. 6d. c.i.f. is quoted to arrive and 13s. 6d. to 14s. on the spot.

15s. od. to 14s. on the spot.

Ofto of Rose.—Finest French is offered at the cheaper rate of from 48s. to 50s. per oz., as to quantity.

Paraldehyde is still selling at from 5s. to 5s. 6d. per lb. from dealers' hands.

PEPPER is steady, with sales of fair black Singapore at 1s. 0_3^3d . per lb. on the spot; Tellicherry has spot sellers at 1s. 2_3^3d ., and Aleppy at 1s. 0_3^4d . per lb. Afloat, black Singapore has been sold at 1s. 0_3^4d . White is quiet, fair Singapore selling at 1s. 5d. per lb. on the spot, and August-October shipment at 1s. 5d. c.i.f. Muntok has sellers at 1s. 5_3^4d . on the spot; to arrive Muntok for August-October and September 1s. Separated 1s. 5d. o.i.f. tember-November shipment is quoted 1s. 5d. c.i.f.

tember-November shipment is quoted 1s, 5d. c.i.f.

PEPPERMINT OIL.—On the spot (London) there is no change, sellers of finest tin oil quoting 3ss. per lb., and to arrive 35s. c.i.f. is quoted. A New York advice (July 23) reports that the planted acreage in the producing districts is considerably larger than last year, and that there is little doubt but that the crop will be a good one. Another advice states that the estimates of increased yield are from 33\frac{1}{3} to 100 per cent, larger, and prices are steadily declining as the distilling period approaches. approaches.

PHENACETIN remains firm at from 20s. to 21s. per lb. Licences to import are being held up by the Board of Trade, and in two instances we hear of a refusal. Forty packages have arrived from Ostend.

PHENAZONE is unchanged, and selling at from 27s. 6d. to 30s. per lb., according to quantity and the idea of seller.

PHENOLPHTHALEIN.—Spot holders ask 24s. to 25s. per lb., and for forward delivery 17s. 6d. is quoted, but the difficulty would be to get a permit.

PIMENTO is steady, with spot sellers at 5_4^3d . per lb.

POTASH CARBONATE.—In view of the fact that large consignments are on the point of being shipped to this country

signments are on the point of being shipped to this country lower prices are anticipated.

Porash Iodde is in fair demand. All the cheaper lots of Japanese were absorbed at from 13s. 10d. to 14s. per lb., and the price is now practically on a level with English make. The exports from Japan during May amounted to 15,549 kin, valued at 102,652 yen. During the five months ended May 31 the exports were:

Of crude iodine, 2,312 kin, valued at 15,748 yen, were exported during May, and the exports for the five months ended May 31 were:

			1917	1918	1919
Kin			11,521	37,165	12,402
Yen	•••	•••	98,640	220,584	78,074

POTASH PERMANGANATE.—Spot prices vary from 3s. 3d. to

3s. 6d. per lb.

QUININE.—The exports of quinine from Java from January to March 1919 compared with the same period of 1918 were as follows:

			1 918	•	1919
To			Kilos.		Kilos.
Great Britain	•••		20,274		21,377
Europe	•••		2,000		4,104
U.S.Ā	•••	•••	4,253		10,446
British India			9,148		10,230
Singapore			1,045		352
China	•••		4,854		2,254
Philippines	•••		655		1,895
Japan		•••	6,766		3,119
Australia	• • •		584		6,926
Other Countries			968		2,210
			• 50,547		62,913

QUININE ETHYL CARB, is offered at 10s. 6d. per oz. by dealers.

RHUBARB.—The landings during July amounted to 24 oases and the deliveries to 104 cases, leaving a first-hand stock of 104 cases, this figure being corrected by inspection; the stock of Chinese rhapontica is 293 bags.

Salicylic Acid.—Some English makers ask 2s. 6d. per lb. for forward delivery owing to the further advance in car-bolic acid. Meanwhile, supplies of B.P. powder are still

obtainable at 2s. 4d. from intermediaries.

Santonin.—From August 1 the prices of pure crystals were advanced by 100s. per kilo., the current quotation being 600s. per kilo. in lots of at least 50 kilos. For smaller lots the quotations are: 25 kilos., 620s.; 10 kilos., 640s.; 5 kilos., 660s. per kilo. net ex wharf London, payment net cash against d/o. The above advance is due to scarcity and a large demand.

SAESAPARILLA.—The landings in London during July amounted to 7 bales and the deliveries to 121 bales, leaving a stock on July 31 of 1,145 bales.

SHELLAC shows a further stock of the stoc

a stock on July 31 of 1,149 bates. SHELLAC shows a further appreciable advance, with spot sales of usual standard TN Orange quality at from 435s. to 455s. per cwt., and fine Orange at from 440s. to 480s.; the value of cakey AC Garnet is 360s. For July-August shipment the sales include TN at from 422s. 6d. up to 440s. c.i.f. Futures also show a considerable advance, the sales being chiefly for October delivery at from 440s. to 471s. per cwt. The London stock at the end of July was 29,228 cases, against 21,821 cases at the corresponding period of 1918.

Soda Salicylate is firm at from $3s.\ 6d.$ per lb. upwards for B.P. powder.

SULPHONAL is lower than when we last quoted, importers offering at 90s., and methyl sulphonal is also offered at 90s. for spot supplies.

Thymol.—English makers ask 32s. 6d. per lb. for B.P. crystals, which is rather firmer.

TURPENTINE.—A good business has been done in American at lower prices, the closing quotation on Wednesday being 124s. on the spot. Much larger supplies have come to hand of late.

VANILLIN. --The arrival in London of a good-sized quantity, per the Mississipi from New York, which was sent to the docks before the Proclamation took effect, has resulted in a substantial decline. Based on the price of cloves (say, s. 9d.), the fair market value of vanillin is now 70s. to

18. 93.), the tair market value of vanilin is now 70s. to 72s. 6d. per lb.

Wax, Vecerable.—Japanese is easier, with spot sellers at 97s. per cwt. The exports from Japan during May amounted to 33,270 kin, valued at 11,589 yen. During the five months ended May 31 the exports were:

1917 1918 1919 ... 1,551,689 3,165,768 517,224 Yen ... 474,763 995,309 171,432 Wood Oil.—Chinese shows a further advance to 132?. 10s.

per ton on the spot and 125l. to arrive.

Glycerin.

The following is from the "Morning Post": "The Imperial Government (writes a well-informed South African correspondent) were left at the close of the war with a largo stock of glycerin, the equivalent, I understand, of somewhere about 18,000 tons of crude, which they have handed over to the United Kingdom Glycerin Producers' Association (a combination of all the principal soapmakers in the United Kingdom), to sell under commission pari passu with their own stocks. The Government have, of course, paid for the whole of their stocks. The result of this deal is to put many pounds sterling per ton into the pockets of the soapmakers, wholly at the expense of the users of glycerin; it is also understood the combine are endeavouring to rope in the French producers as well, so that they will have effectively cornered the glycerin market and be in a position to name their own price. This is a grievance especially to the South African mining industry, to which cheap glycerin for the manufacture of dynamite is a vital necessity. During the war the Rand gold companies only received a standard fixed price for their gold. This price left many of them without a profit, and it is a tribute to their patriotism that they continued to produce without complaint. Several mines are now on the verge of closing down owing to higher warms and the companies in the cost of mining. wages and the enormous increase in the cost of mining supplies. No doubt in some measure this is due to profitering and high sea freights. But now the Government, by creating a corner in glycerin, will make dynamite exorbitantly dear. They are, in fact, giving a glaring example of the years profit and a grainst which they are now introof the very profiteering against which they are now introducing a Bill. And they are also striking a very serious blow at one of the most important of the producing industries of the Empire at a time when increased production is vital."

Arrivals of Chemicals, Drugs, etc.

The following arrivals have taken place at the ports named :

(August 5 to 11). Alcohol, crude (Canar. Is.), 174 × ½ pps. Alcohol, wood (U.S.),

Alcohol, wood (U.s.), 62 drms, Almonds, (Fr.) 523 sks, (Sp.) 125 bgs, 50 kgs, (N.Y.) 102 cs. Barytes, (Antw.) 1,201 bgs, (Sp.) 237 brls. 576 pkgs, 100 bgs, (U.S.) 312 brls. Carbon black (N.Y.), 120 cs.

120 cs. Casein, (N.Z.) 8,030 bgs., (Fr.) 133 sks.

Chemical products, etc. not described (U.S.), 134 pkgs. Argol (Fr.), 200 bgs described.

Arsenic (Antw.), 100 brls.
Boric acid (N.Y.),
449 pkgs.

Calc.tartrate(Patras), 508 bgs. Creosote(Swe.),20 cs.

Formaldehyde (New York), 224 brls.

Hydroquinone (New York), 4 cs. chlor. Magnes.

Magnes. chlor. (R'dam), 113 cks. Mik sugar (N.Z.), 100 cs. Oxalate (noutra) (Norw.), 40 kgs. Oxalic acid (Norw.), 80 cks.

Pot. binox. (Norw.), 40 brls. 106 kgs. Phenacetin (Osteud),

40 pkgs. Potashes (Amst.), 100 brls. Potash salts(R'dam),

500 tons Saccharin (N.Y.), 7

Saltpetre (Cal.), 40

Tannic acid (N.Y.), 10 brls.
Tartar (Fr.), 358 sks.
130 cks. 222 brls.
Thorium nit. (U.S.),

Zine oxide, (R'dam)
500 cks., (U.S.) 200
brls. 100 sks.,
(Antw.) 300 brls.

Drugs, crude:
Aloes (N.Y.), 150
pkgs. 50 cs. Asafetida (Persia), 24

pkgs. Buchu (Cape), 7 bls. Cardamoms (E.I.), 1,240 cs. 72 bdls. Cassia fistula(Amst.),

28 bskts. Chamomiles (Ghent), 10 bls.

Cinchona (W. Af.),

Cod-liver oil(R'dam), 50 cs. Digitalis (Sp.), 21

bgs. Galls (Persia), 547 bgs.

Liquorice-root (Sp.), 353 bls. 10 bgs. Liquorice-paste, (Fr.) 40 cs., (Sp.), 50 cs. Opium (Persia), 91

Podophyllum (N.Y.), 57 pkgs.

Sarsaparilla (N.Y.), 40 bls. Senega (N.Y.), 17

pkgs. Tamarinds (E.Ir), 50 cks.

Drugs, medicines, etc., not described (U.S.), 174 pkgs. 150 cs.; celerina (U.S.), 20 cs.; Fellows' syrup (N.Y.), 269 cs.; glaxo (N.Z.), 3,800 tins; milk of mag-nesia (N.Y.), 200 bxs. 150 crts.; Sloan's liniment (U.S.), 1,000 os.; taloum powder cs.; talcum powder (U.S.), 36 cs.

Dyes, dyeing and taning materials, etc.: dyes, not described (N.Y.), 150 pkgs.; aniline (Ostend), 234 pkgs.; cochine (Canar. Is.), 11 bgs cochineal cutch (Figoon), 600 bxs.; extract (chest-nut) (Fr.), 284 cks.; (tanuing), 475 brls. 155 cks.; indigo (Cal.), 26 chts. 101 cs.; myrab. (Cal.), 5,796 pkts.

5,796 pkts. Gelatine, (Fr.) 76 cs., (Ghent) 14 bls., (R'dam) 140 bgs.

Glucose (U.S.), 316 brls.; (chips) (N.Y.), 100 bgs.

Gums, resins, etc.: not described (Persia), 72 described (Persia), 72 cs. 489 bgs.; copal (Fr.), 142 cs.; lac (Cal.) (shell), 4,486 bgs. 1,074 chts.; (button), 90 bgs. 226 chts. 253 cs.; resin, (Fr.) 50 brls. 1,395 cks., (Port.) 52 brls., (U.S.) 400 brls., (Sp.) 30 brls. (open) (N. 2.) 244 bys.

Honey (N.Z.), 294 bxs. 566 cs. Lead, white (N.Y), 128

Lithopone (U.S.), 2,723

brls. Magnesite (R'dam), 113

cks.
Oils, essential: anise, star (Ch.), 100 pkgs.; turpentine, (Swe.) 106 cks., (Antw.) 530

brls.

Oils, fixed; hardened (R'dam), 359 brls.; coconut, (Cey.) 761 pkgs., (Cal.) 13,500× † cs., (Amst.) 464 brls., (U.S.) 1,196 brls., (R'dam) 1,204 brls.; cottonseed (R'dam), 1,549 brls.; ground-nut (R'goon), 98 cs.; (R'goon), 98 cs.; olive, (Fr.) 235 cks.

20 cs., (Sp.) 1,842 brls.; palm (R'dam) 416 brls.; rape (Antw.), 118 brls.; sperm (Port.), 58 brls.; whale (Cape), 1206 dyng. 1,296 drms.

Petroleum jelly (U.S.) 601 pkgs.

Quicksilver (Sp.), 5,000 flasks

Seeds: anise (Persia), 546 bgs.; canary (Sp.), 229 bgs.; cara-(Sp.), 229 bgs.; cara-way (Amst.), 100 bgs.; copra, (Cey.) 36,600 bgs., (W.L.) 1,520 bgs., (U.S.) 1,436 tons; cotton (Cal.), 2,000 bgs.; ground-nuts (Fr.), 711 sks.: liu (E.I.), 46,509 bgs.

Spices: cassia (Ch.), 500 cs.; ginger (Ch.), 350 cs.; pepper (N.Y.), 1,597 bgs.

Starches (U.S.), 2.580 bgs. 9,441 pkgs.; (farina) (Holl.), 250 bgs. Tale (Fr.), 2,046 bgs.

Vanilla (Fr.), 6 cs. Wax, bees' (Cal.), 63

Wax, carnauba (N.Y.) 553 bgs.
Wax, parafin, (R'goon)
3,200 pkgs. (U.S.)
532 bgs. 515 brls.;
(scale), 880 brls.
Zinc white (R'dam),
309 brls,

Liverpool

(August 2 to 9). Almonds, (Canar. Is.) 68 bgs. 250 cs., (Sp.) 100 bgs. 227 cs. 25 sks.

Bismuth ore (Ch.), 112 Carbon black (N.Y.),

79 cs. Chemical products: Argol (Fr.), 433 bgs. Aspirin (N.Y.), 8 cs. Calc. tartrate (Fr.), 165 bgs. Nickel oxide (Can.),

235 brls. Potashes (Tky.), 104

brls. l'otash chlorate(Fr.),

22 cks. Potash (R'dam),1,000 bgs. Tartar, (Fr.) 25 cks. 107 bgs., (N.Y.)

200 cks. Dextrin, white (N.Y.), 1,760 bgs.

Drugs, crude: Aloes, (Curacao) 100 bxs., (N.Y.) 170 cs. Areca (Cey.), 124 bgs. Balsams(Maranham

26 pkgs.; tolu (P. Colombia), 20 cs. Canagra root (Vera Cruz), 911 bgs.

Cassia fistula(Amst.),

Cassia istuia(Amst.), 60 bskts. Coca-leaves (Cristo-bal), 418 bls. Cod-liver oil (St. John's, N.F.), 551 cks

cks. Condurango (Cristobal), 99 bls. Ipecacuanha (Cristo-

bal), 7 pkgs. Jaborandi (B'zil), 5

bls. Jalap (V.C.), 29 bgs. Kola (W. Af.), 482

Opium (Tky.), 102

Cs.
Orange-peel (Malta),
7 cs., (W.L.) 52 brls
Saffron (Sp.), 1 cs.
Sansaparilla (Cristobal), 43 pkgs.
Squill (Malta), 29
hrs.

bgs. Drugs, medicines, etc., not described, (Fr.)

not described, (Fr.) 12 cs., (Can.) 82 cs., Fellows' syrup(N.Y.), 958 cs.; Sloan's lini-ment (N.Y.), 902 cs.; vaseline (N.Y.), 11 pkgs. 76 cs..

Dyes, dyeing and tanyes, dyeing and tanning materials, etc.: cochineal (Canar. Is.), 24 bgs; cutch, (S'pore), 500 cs.; dyewood ext. (U.S.), 400 bxs.; extract, tanuing, (U.S.) 1,178 brls., (Fr.) 281 cks. 1,489 cs.; fustic (W.1.), 4 tons; hematiue (N.Y.), 156 brls.; indigo (S. Amer.), 35 pkgs.; madder (R'dam), 2 cks.; myyab, (Cal.), madder (R'dam), 2 cks.; myrab. (Cal.), 776 pkts., (crushed) 6,013 pkts., (extract) 900 pkgs.; que-bracho ext. (B.A.), 24,105 bgs.; valonia (Smyr.), 248 bgs. 50 tons tons



The Unjust By-law.

SIR,—Now that the by-law has been passed, may we trespass on your space in order to give a reply to the circular letter sent out by the President of the Pharmaceutical Society (Mr. W. L. Currie) to all members of the Society, which was endorsed by sixteen members of the Council? The object of the letter was so obvious, and it so completely convicted its authors, that we need not waste your space by pointing out its gross inaccuracies and exaggerations. We acknowledge it as a splendid testimony to our stand for upholding right, principle, and truth. We were elected to represent the progressive trend of thought in our midst for the governance of our craft, and we, at least, have kept the faith. Another pyrrhic victory of this nature would be so destructive to our Society that we venture to suggest that it is urgently necessary that all future questions of a controversial nature shall be submitted to the Associations before anyone becomes committed to definite lines of action.

A. SIDNEY CAMPKIN. FRANK G. HINES. HERBERT SKINNER. HUGO WOLFF.

SIR,-On the evening of Wednesday, August 6, after the by-law had been confirmed, a large number of pharmacists met at the Progressive Pharmacy Club, not downhearted by any means, but with a firm determination to form a definite progressive party in pharmacy pledged to make further dilution of our quantication impossible. Moreover, to differentiate at once between the passive acceptance of official dicta and freedom to know and think; publicity, among ourselves as well as the general public; to take definite action over public clinics and the "Ministry of Health" in its relations with the public services; in other words, to fight for our rights—the rights of democracy within our ranks and the rights of pharmacy with governing bodies and the general public. We want to show our country, friends that it is not parochial and confined to London. At the next Pharmaceutical Council election we want six new men from the country to stand for pharmacy and progress. Will all who have the feeling of progress within them and are desirous of seeing a definite organised progressive party in pharmacy formed, write to me at once, as I have agreed to act as provisional secretary.

Yours truly,
32 Antill Road, Bow, E. 3. HUBERT B. FIGG, M.P.S.

SIR,—In reply to an anonymous letter I have received regarding my views on the unjust by-law, I wish to say that my remarks were not addressed to unqualified men who have served a regular apprenticeship, passed the preliminary examination, attended a school of pharmacy, and failed several times owing to nervousness, etc. My remarks were that the admission of apothecaries' assistants was unjust to the qualified and unqualified man also, for personally I would rather see such men as these registered in preference to apothecaries' men, if there is a just necessity for putting the clock back fifty years. What other profession would ever be induced, either by threats or persuasion, to excuse men from both the preliminary examination and qualifying examination, just for fourteen guineas—i.e., 2l. 2s. above the actual fees paid by those who had carried out all that is demanded by the Society in its by-laws? The only excuse I can think of is we are carrying out the Scriptures "by treating our neighbour as ourselves and admitting the stranger to our gates."
Why on earth we should share our privileges (1) with limited companies; (2) with seedsmen, oilmen, and others; and now (3), and perhaps not lastly, with apothecaries' I do not know. After twenty-five years' connection with London pharmacy, I firmly believe we have given away more than ever we have gained, and if we

keep on giving our rights away to all these people who wish for them without trouble and without work, what will our final position and status be?

West Hampstead. ALBAN ATKIN, M.P.S.

SIR,-I thank you for your courtesy in publishing extracts from my letter to Sir William Glyn-Jones re the new from my letter to Sir William Glyn-Jones re the new by-law. I also sent a copy of the letter referred to to the "Pharmaceutical Journal," but they did not publish it, it being, I will charitably presume, "unavoidably left over for want of space." What a game it is, as "John Bull" says. Allow me to point out a few facts. Notice the immediate "lowering" of the Society's examination. Please refer to the notes, "Minor Experiences by a Successful Candidate," in the "Pharmaceutical Journal"; it ought to be headed, "Experiences of a Day's Outing by a Minor." I say that any fairly intelligent first-year apprentice could easily pass it, and these 150 wonderful men of theirs (whom they practically say 150 wonderful men of theirs (whom they practically say are to keep us from utter ruin) could not fail to pass, providing that they all were of average ability. Is it not laughable that these Councillors should dream that they could saturate us with the idea that our very stake and future progressive policy depends upon the entrance in our midst of this "diluted labour"? I really feel ashamed to now belong to the craft, because (through our Councillors) we are, and must be, the laughing stock of the Privy Council, the medical profession, and all others who have any interest in pharmacy. Again, look at National Insurance dispensing. Twopence for dispensing a script-and this is all we get and all we are thought worth. Why? Because we were badly represented and were accordingly treated as "labour." Again, the new Ministry of Health wants labour, and these Councillors are going to get it for them, "diluted" as much as you like and as cheaply as possible. We sent these men to the Council to-at least-hold us up, but they are letting us down even unto the dust! I feel (and I am sure there must be many that feel the same) so small and kicked that I do not like to meet any medical man or anybody I know reads pharmacy news. I think that we "protest men" should wear some kind of badge with the wording, "Member of the By-law Protest Committee," upon it, and so show that at least we were men enough to "kick." I know men-men of honour, principle, and courage—who have put "Yes" on their voting cards. But in my opinion they have in this case been led astray by the "bogey" (set up by this secret club at Bloomsbury Square) of "resignation" and other dire calamities if they did not sign "Yes"; and furthermore I venture to say that there are hundreds in the same boat. Again, may I refer you to extracts from the leading article in Saturday's "Pharmaceutical Journal" regarding the meeting under discussion? It says: "Such ebullitions of feeling and temper that did occur were on the part of individuals of the temperamental type who are always in evidence under such conditions." Please note that these individuals with "feelings and tempers" belong solely (in the writer's opinion) to the "protest portion." This article is written in the same strain and refers to the same men as the paragraph contained in that amazing william) sent out by the Council before this last meeting. Here it is: "They are an organised opposition" (no doubt the word "mob" or "gang" occurred to the writer, but he did not like to be quite so rude as to say that), "and one so discreditable as to forfeit respect." Please also note in this same leading article that utter absence of any mention of sympathy with the men who find themselves "in the crowd with this diluted labour." No, these men have gained their point and saved their dignity (as they think), and this is evidently all they care about. Once again, may I refer to the President's address of thanks (after having got entirely his own way)? He says, "Whilst health and strength remain to me I shall continue to devote myself with heart and soul to the interests of my fellow pharmacists." Please note that this devotion is only to be secured to pharmacists. on condition that he always gets his own way. Why do I

say so? Listen to this extract from his own statement: "I and the majority of members will resign if this by-law is not passed."—Yours very truly,

Taunton. H. R. Duncan.

SIR,—If you will print in parallel columns the following extracts it will best show the distracted state of mind with which the majority of the Council forced and faced the great issue of August 6:

The majority of the Council have no desire to imitate the peculiar methods of the hostile minority. All that they ask, and have a right to expect, from the members of the Society is fair play and a dispassionate examination of the pros and cons of the proposed by-law. To secure this there is no need for them to descend to chicanery of any sort. It ought to suffice, as has now been done in printed statements issued to all members of the Society in the United Kingdom, clearly to set forth the dominant issue which the members of the Society have to face at the postponed Special General Meeting on August 6.—"The Journal," Pharmaceutical August 2.

We, the undersigned members of the Council, regret that, important as the issue may be of whether the proposed by-law relating to apothecaries' assistants is passed or not, it involves another and probably another and probably greater issue. The rejection of the by-law would cause a complete departure from the present attitude of the Pharmaceutical Council towards the Privy Council, involving also other Government Departments, and the adoption of a policy for the direction of which we could not make ourselves responsible. We therefore place our resignations in your hands on the understanding that they are to be acted upon in the event of the members, by means of their replies to the referendum that you propose to take, deciding against the by-law, and thus indicating that we do not possess the confidence of the majority of the members.—Letter of the sixteen Councillors to the President

SUBURBAN. (18/07.)

The italics are mine. I should like to ask my fellow-members what, now, was the issue? Where was the possibility of its dispassionate examination? And where did fair play come in?—Yours truly,

SIR,-In the matter of the new by-law the Pharmaceutical Council has won, as far as confirmation by the special general meeting of members held last Wednesday is concerned. There is nothing, however, to be proud of in this, for every member who answered the referendum in the affirmative and voted "Yes" at the special meeting did so with a feeling of hot indignation that they had been led into a position which made such a step necessary. The confidence of members has been severely shaken, and will not be restored while the present men hold office. The Secretary, Sir William Glyn-Jones, is no doubt a most excellent man in many respects, but he has shown himself on this occasion too masterful and adept in methods that do not commend themselves to his less gifted fellows. I voted for confirmation of the by-law as a soldier submits to evacuation of a hard-won position when he is assured it cannot be held; but, unlike the soldier, I reserve the right to question the efficiency of the men who allowed the position to be "turned." The day is past when the rank and file can be dragooned into any action which those in temporary authority may decide on and the fight over this by-law has had an educative value which is incalculable. - Yours truly,

Bellshill. Alexander A. Dick.

SIR,—A great deal has been said about this unpleasant and unpalatable business, chiefly abusing those at work on it. True, it was a big difficulty, and there was a tremendous prejudice against the principle involved. Nobody can look back at the "Minor" difficulties with greater respect than myself, and there were good reasons to guard jealously any infringement of the one way to register. Some may notice that a change is sometimes sought by qualified chemists in going to institution dispensing; there is some improvement on working hours, liberty, and domestic outlook. The situation is anyhow

better than speculation of own business and indoor conditions. The seven years required since 1908 looks like eleven if an earlier certificate is taken and the steady holding of the situation is to coincide. It certainly looks to me somebody is comfortable and moving from a certainty is absurd; and as regards adding the payment for the movewell, ridiculous. On the other hand, there were many attending at Farringdon Street who went to reject at all cost any "thin end of the wedge." I was among them. True, as the meeting was not then recognisable for business, and I had to leave before the vote was taken, there was something of the feel of having been fooled about. The referendum there asked for, the counsel's opinion there asked for, both duly granted, and the fuller explanation forthcoming, set me thinking again. I noticed the speakers at that meeting, and of all let me congratulate Sir William Glyn-Jones on his effort, not on his support. As regards the resignation of the Council members—well, that was "sporting," sporting as we understand "sporting" the last week before the "Minor." I see nothing either shirking or cowardly about it, nor do I now expect resignation from Messrs. Wolff and Co. after Mr. Wolff's speech last Wednesday. One could not very well put "Yes" to the referendum, that way supporting the Councii without following it up. For myself, I saw occasion to go to the second meeting, irrespective of the expense involved and the time absorbed, and was pleased the vote was taken early, and surprised at the result. Both parties had "worked," but what pleased me most at that meeting was the finish up, the friendly outlines and thanks all round. I see no reason why the Society should lose any financial support from its members. They put off the "evil day" to their utmost, and when done are perhaps giving back something to holders of "Hall" certificates superseded by "Minor" men. Вколдносме. (249/61.)

SIR,—With regard to the by-law to register apothecaries' assistants as chemists and druggists, I would much prefer to see unqualified men registered who had been not less than fifteen years under qualified supervision. I do not think much of our system of examination; the number of failures at each is too much of an average for fair play. I find that civil engineers are being faced with the same difficulties. I wonder if lawyers and solicitors will be willing for unqualified men to be registered as lawyers and solicitors without examination? I know many young lawyers' clerks who are as good as their masters, but they lack the necessary finance. Knowledge in any sphere is not confined to any set section of the community, and never will be.

Yours respectfully, J. R. Huck, M.P.S.

SIR,-Now that the unjust by-law has been passed, it is, of course, futile to comment on the methods employed to accomplish the fact; but, judging from the opinion one hears expressed on all sides, we are most of us of one mind, and it is to be hoped that expression for that opinion will be found at the next Council election. Meantime, however, no one has any delusion that the 150 fourteen-guinea chemists are the only and final ones to be admitted. Having approved of admitting men who have never attempted to study for the Qualifying examination, have not the men who have honestly tried to pass and failed as good or better claim, witness the letter signed "One of the Craft" (C. & D., August 9. p. 72)? I cannot help digressing here to point out that a man who fails at a critical moment "through a fit of nerves" is just the person who should not be let loose as a purveyor of poison to an unsuspecting public. Having accepted, however, the principle of registration without examination, I desire to place on record the logical sequence of such a step; the results will appear in three directions—educational, National Insurance dispensing, and commercial. From an educational point of view it is, of course, in absolute contradiction to the modern idea of better and more scientific training. The Minor examination becomes useless, and the School of Pharmacy and Galen Place will ultimately close their doors from lack of students and candidates. With regard to Insurance dispensing, probably at the end of 1920 the present panel

chemists will not be given the option of renewing their contracts, which will be allowed to expire, and the Ministry of Health will by that time have their machinery ready for the new scheme. From a business point of view, the Ministry of Health are considering the insertion of a clause to deal with proprietary remedies, and will also possibly extend it to prohibit counter-prescribing, in order to compel the public to accept panel treatment; the drug-store men will certainly claim registration, why not include, therefore, horticultural suppliers, grocers, barbers, or, in fact, anyone who dabbles in drugs or sundries? To carry out the claim of reasoning to the end, there is really no future use for qualification at all. Let us cut out the professional cackle altogether, and stand or fall on our merits as traders pure and simple. From the qualified managers' and assistants' point of view, the first result will be that the company shops and stores, whose goods are all supplied packed and ready for sale from central depôts, will be provided with a supply of cheap labour, mostly inexperienced or incompetent, but having the effect of reducing wages all round: I am not a pessimist, but I certainly think that the next few years will see most, if not all, my prognostications fulfilled; but there will be no satisfaction in saying "I told you so" to the 682 members who helped us to commit professional hara-kiri. Yours faithfully, hara-kiri.

SIR,—With reference to the unjust by-law, may I point out that, whilst its unfairness has been well ventilated in your columns, its real raison d'être has barely been mentioned? The excuse for lowering the standard of qualification would appear to be a shortage in the number of qualified pharmacists. If this shortage be a real one, and not a stratagem to obtain cheaper though less efficient service, then it is obvious that the deficiency must be made up at the earliest possible moment; but the line of advance should be by higher technical and scientific education, and not by a lowering of our standard. No chemist needs telling that the Apothecaries' Society's assistants' examination cannot attain this. We all know men of many years' experience whom, although theoretically unqualified, we can trust implicitly with ordinary counter work. If the alleged shortage is to be made up, I would suggest that these men of experience should be utilised, and that those of twenty years' experience and upwards, after being certified as efficient by three qualified chemists, should be recognised as qualified to take temporary charge during meal-times, short holidays, etc. This method would enlist men of great practical experience and also of good scientific attainments, who could assist the profession over a difficult period much better, and with less ultimate loss of prestige, than could the class of person brought in by the new by-law. Yours faithfully

CHAS. HAMUS. (247/3.)

Bradford. A. N. WHITE, M.P.S. "A Country Member" (79/3) sends us the following

impressions on the meeting on August 2:

It was a splendid hall for a meeting. Glyn-Jones was in great form, very concise and very clear. The President was a very indifferent Chairman; he lacked humour, and was constantly asking for trouble. He asked for questions, but did not invite anyone to speak, with the result of disorder. Some of those present were very excitable, others badly mannered. Messrs. Rowsell and White looked highly amused all the time, as if it was Mr. Campkin looked very miserable all a huge joke. and quite out of place as a member of the quartette. Mr. Hines looked determined; while Mr. Skinner appeared quite downhearted. As to Mr. Wolff, he looked as happy and as irresponsible as a schoolboy. His speech did not create confidence, although he has plenty of confidence in himself. Messrs. Keall and Melhuish took my fancy. They seem to have cool heads, and looked quite unconcerned; and the same applied to Mr. Pilkington Sargeant; while Mr. Moreton Parry appeared ready to fight anyone. Messrs. Harcombe Cuff and Lord Gifford looked very sad, as if they were seriously thinking about resigning. There were many ladies present, while Miss Gilliatt showed a great deal of courage in addressing a large

meeting like that, reminding me of the days when Suffragettes were plentiful. Now that the by-law is passed I hope that we shall all pull together and all stand together against any further dilution of our qualification.

Legal Queries.

J. W. T. (247/39).—Apprenticeship Indenture.—We published the wording of an apprentice's agreement form in The Chemist and Druggist Diary, 1914, p. 238.

G. W. C. (245/25).—The Medicine Stamp Acts impose a duty on the sale of proprietary medicines, and the makers and vendors must be licensed. Chemists can in certain circumstances recommend medicines which are "known, admitted, and approved" remedies without incurring liability to stamp-duty.

E. K. (247/62).—(1) THE CURRICULUM BY-LAW will come into force for apprentices or students registered after December 31, 1919, or in October 1919 for those already registered who desire to take the Qualifying examination in two parts at separate sittings of the Board of Examiners. (2) An at separate sittings of the Board of Examiners. (2) An Apprentice is exempt from compulsory health insurance if he is not remunerated for his service by some money payment, and this is the case whether his master provides him with board and lodging or not, and whether he pays a premium or no premium when entering upon his apprenticeship. On the other hand, if he is paid a sum of money, however small, for his services, he must be insured in the same manner as any other person compulsorily insured. In Great Britain the ordinary contribution for male persons over sixteen is: employer, 3d.; employed person, 4d.

Miscellaneous Inquiries.

Pharmacien (211/65).—INTERNAL AND EXTERNAL ANTISEPTIC LOTION.—This liquid has a specific gravity which is practically unity, yields 0.01 per cent, of total solids when evaporated on the water-bath, and leaves no ash. It contains iodine compounds, but no free iodine or iodide. It has a slight odour of iodoform, and is probably merely, a substitutional by shelling iodoform with water. There solution obtained by shaking iodoform with water. There is a slight odour suggestive of a phenol, but the solution failed to respond to the tests for phenols.

J. C. & Co. (224/10).—MANUFACTURE OF SOLUBLE ESSENCES.—Walter's "Essence Industry" (Chapman & Hall, 18s. 6d.) is useful. There is a chapter on the subject in "Pharmaccutical Formulas."

White Oil (237/25).—REDWOOD'S VISCOSIMETER is the standard instrument used in this country for testing the viscosity of oils. It is arranged so that the oil can be kept at a uniform temperature, and there is an inner vessel from which the oil is run out, the number of seconds required for a given amount (50 c.c.) being noted.

Retrospect of Fifty Years Ago. Reprinted from "The Chemist and Druggist," Aug. 14, 1869.

The Study of Botany by Pharmacists.

The Study of Botany by Pharmacists.

Mr. F. P. Balkwill (Plymouth) begins a paper on this subject as follows: "The pharmacist is no tradesman who by assiduous attention to the markets, by extravagant advertisements, or even by close application to the ledger and counter, aims merely at the ultimate accumulation of wealth. Far higher is his calling; far nobler his aspirations. In his hands instrumentally are the issues of life and death; health and happiness await his bidding, for the physician might prescribe in vain, unless the medicines were properly made and correctly dispensed, and a mistake at any moment might prove fatal. It is therefore necessary that he should have received the highest mental training, and should continue to devote his mind to culture, and to the study of those things which will develop the habit of accurate attention and carnest thought. At present so vast are the fields of knowledge that one man can only cover a limited area, hence it arises that, in the metropolis, medical men may devoto their entire energies to mastering one men may devoto their entire charges to mastering one department of the human frame, and the diseases incident to it, so that they can have very little opportunity for pushing investigations in chemistry or botany."





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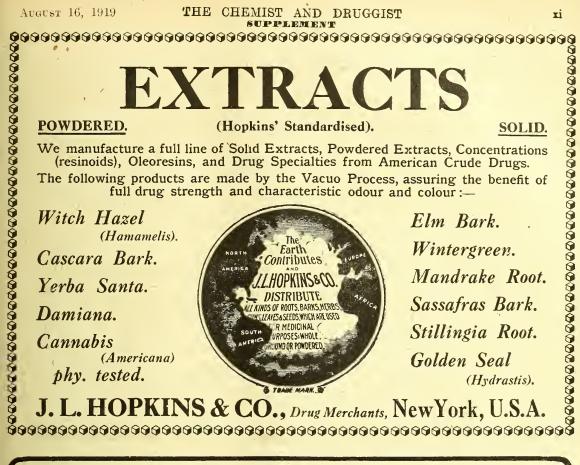
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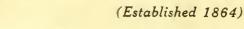
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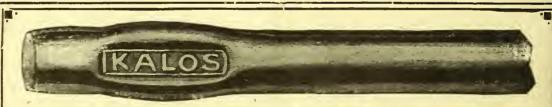
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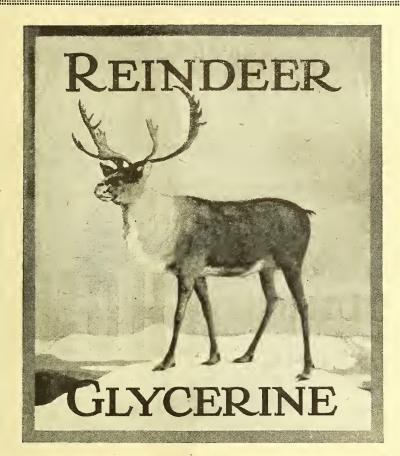
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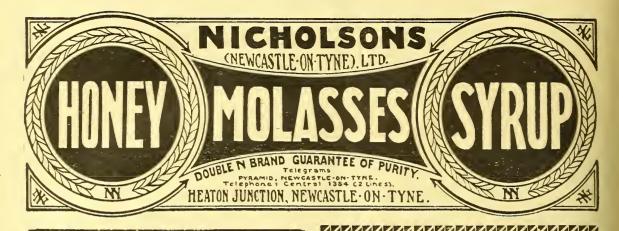
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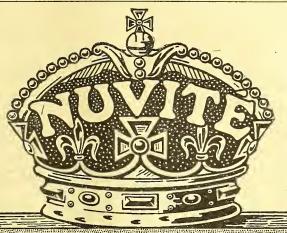
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Circular Shape, Check Sheeting, bound									/6; size 4,	
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Check Sheeting, fancy binding	per doz. 6/0	7/6	9/0	11/0	1	3/0 16/0
,, super best quality	,, 8/0	9/0	10/6	13/0	1	5/0 18/6
Fancy patterns, assorted colours	,, 10/6	12/6	15/0	18/0	2	1/0 25/0
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Waterproof Bag for Sponge, Towel, etc., 10 in.	by 7 in.	•••	• • •	•••	• • •	., 7/0

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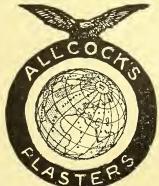
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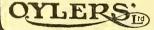






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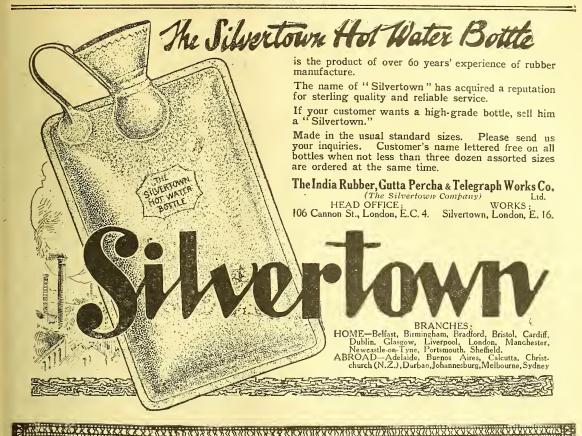
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AUGUST 16, 1919

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The clerical work in connection with the posting of spare copies of the Coloured Supplement week by week has increased to such an extent that we have been compelled to reorganise our system of distribution. Our readers will please note therefore that, in future, instructions can be accepted for not more than six weekly copies of the Supplement at a time, and that in every case

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SCOTLAND.—Good-class Dispensing and Family Busia established; approximate price £1.850; or goods stock and fittings at valuation; banker's reference with Apply 24 15, Office of this Paper.

BRANCH Business; good-class residential snburb, turning at present under indifferent management £40; no opposition; small house, with garden; £350 offer. Apply 22/17, Office of this Paper.

GOOD country Basiness for Sale; over £2,700 turn creasing; good profits; house; well stocked and f position. Full particulars, "Yorkshire" (21/38), Offi Paper.

BUSINESSES WANTED.

4s. 8d, for 50 words or less : 8d, for every additional 10 words or les prepai

SOUTH or Sonth-West England, Coast preferred.—Sont Light Retail Business; good house essential; health cash available. Reply, giving turnover for 1913. 1918. net profits, side-lines, full details of lease, prein strict confidence, to "G. N. F." (12/2). Office of the

CHEMIST-OPTICIAN requires sound Business in hear less with good Optical scope; one with convenient how attactive remain, or would Manage with view to succession fulficulars in confidence to "Retinoscope" (20/27), Ofe of Paner.

GH Business wanted; turnover about £1,500 per annum; Lanca, Yorks, Cheshire, or Great Eastern Railway main unctown, seaside, or country; good house and garden; if lock-up no must have option of succession to house; could take over muliately; cash ready. Reply to "Chemist," Sunnyhurst, muliately; cash

OD-CLASS Business required, with good living accommodation of possible; healthy district; cash available £400-£500, moder by arrangement; seaside preferred, hut not essential it rust pleasantly; replies respected as confidential. "Pharmast (17/3), Office of this Paper.

not necessary; cash, or part cash and balance by arrangern living accommodation essential. Please send full part is to "Statim," 45 Parma Crescent, Lavender Hill, S.W.

CND Business on the Coast preferred, hut not essential; cash visilable; letters replied to. Fullest particulars first letter fidence to "Neptune" (20/18), Office of this Paper.

NTED, for cash, small Drug Store; would undertake danagement with view to purchase. Full particulars to, Office of this Paper.

NTED (at once), a small neglected, nnopposed country Jusiness. Replies to "G." (22/19), Office of this Paper.

AGENCIES.

4s. fer 50 words or less; 8d. for every additional 10 words or less, prepaid.

TYA AND FAR EAST.—Agencies wanted by Representative f large Drng firm for lines that will not clash; he has well the Far East for many years, and has an extraordinarily connection, and will shortly be returning. Apply rt" (249/2), Office of this Paper.

CHESTER, LIVERPOOL, LANCASHIRE.—Advertiser qualified Chemist) open to accept Agencies for well-advertiser proprietary lines; resident in Manchester; capable and the control of the contro excellent opport

PORTUGAL.

PORTUGAL.

TO Firms desirons of capturing German trade in Portugal an opportunity is afforded of discussing details by the presence in London of our Managing Director, Mr. Fryxell. We are open to take up agencies for Drugs, Chemicals, Druggiets' Sundries, Snrgical Instruments, etc., and Mr. Fryxell will be pleased to call on firms interested to give first-hand information.

Address Clarke & Fryxell, 12 Richmond Road, W. 2.

GVT for Poland for many years, of one of the largest ermen Colour Manufactories, perfectly connected with the sand Russian market, seeks first-class English Agencies for and articles in the same line: Pharmaceutics, Cosmetics, Chemicals, and Perfumery; excellent references; offers Representation," Bureau Central d'Annonces, L. & E. 22 Co., Varsovie, Rue Marezalkowska, 130.

PLEMAN with own Travellers calling upon Chemists ronghout the British Isles requires Agency; only first-class cturing firms who want their goods on the hest markets E. Goodby, 50 Barker Street, Rood End, Oldbury, near

UFACTURING Chemists, with a staff of Representatives roughont the kingdom, are prepared to accept good Side bitch would appeal to Chemists, Hairdressers, Stores, etc.; itish Agency preferred. Replies, with full particulars, to ressive "(251/10), Office of this Paper.

DH MACIST, recently demobilised, with 12 years' sound resonal connection (Chemists and Doctors) on Tyneside and seeks to sell on commission the following:—Pills. Dressings, Sundries, Packed Specialities, etc. Write W. D. Kinnis, Pharmacist, 26 Ivy Road, Gosforth, New-

TED, for Beds, Herts, and Bucks, Buying or Commission encies in Fine Chemicals, Druggists' Sundries, or Pharacterial Preparationa. Replies to "X. Y. Z." (251/16), Office

SITUATIONS OPEN.

4s. 6d, for 50 words or less; 6d, for every additional 10 words or less, prepaid,

RETAIL

BATH.—Davies & John, Chemists, have vacancy for Assistant with good Dispensing and General experience; only good rnarmacy experience of any use. Apply, giving full particulars in first letter, to Mr. John.

BEVERLEY.—Assistant, nnqualified, wanted; good-class Dispensing and Counter trade; kindly state experience, salary, and age, photo if convenient. J. G. Anderson, Chemist, Beverley.

BOURNEMOUTH.—Improver or Junior wanted for Light Retail O(outdoore); hours 9 to 7, time for study can be arranged, rnarmacy classes in the town. Apply, with particulars of experience and salary required, to J. K. Matterson, The Arcade.

BOURNEMOUTH.-G. E. Bridge & Co., Ltd., require an unqualified Junior Assistant (outdoors). Reply with full particulars to W. E. Curtis, 128 Old Christchurch Road, Bourne

BOURNEMOUTH.—Energetic Assistant (male) for Dispensing and Light Retail business; good salary to reliable man (outmouth West.

BOURNEMOUTH.-Junior or Improver required who has had some experience in Dispensing, no A.A.I. work done; but one jist completed apprenticeship; state salary required (outdoors), age, and experience; send photo if convenient, which returned. C. D. Cumber, Chemist, Winton, Bournemouth. which will be

BRIGHTON.—A qualified gentleman wanted for Light Retail and Dispensing; good Counterman essential; salary, etc. smithsons, Preston Circus, Brighton.

BRIGHTON.—Young unmarried Assistant for high-class Retail and Dispensing business; qualified preferred; good Dispensing experience an essential; please give full particulars in first letter. Parris & Greening, 105 Church Road, Hove.

PRIGHTON.—Assistant required for Light Retail who has, or wishes to acquire, a knowledge of Sight Testing (outdoors). Aceply with full particulars to Black & Co., Chemists and Opticians, 132 Western Road, Hove.

CHISWICK, W., 4.—Experienced Dispenser required; part time, mornings 9-12. Usual particulars, etc., to J. W. Webber, Pharmaceutical Chemist, 202 High Road, Chiswick, W. 4. 'Phone, Chiswick 229.

CLERKENWELL.—Required (at once), qualified Manager (ont-doors), chiefly for N.H.I.; quick and accurate Dispenser; salary £3 15s. and commission on total takings. Full particulars to 23/12, Office of this Paper.

CODNOR.—Wanted (immediately), a capable and trustworthy nnqualified Assistant desiring a permanency and willing to settle in a Derhyshire village; must be a careful, experienced Dispenser and a good Stockkeeper; hours of duty light; in addition to salary a system of profit-sharing is available to the right man. Send full particulars in first letter to Clement W. Ridyard.

CONSETT (North-West Durham).—Qualified man wanted very shortly for brisk Cash Retail; no N.H.I.; able to take charge when required; age 25 to 40. Please send age, height, and salary required, with recent photograph and reference, to G. Pattrick, 33 Front Street, Consett.

CROYDON.—Assistant required; good-class business; Dispensing, etc. State reference and salary required to W. E. Matthews, 40 George Street, Croydon.

DERBYSHIRE.—Qualified Manager (ontdoors) for country Pharmacy; must be good Prescriher, energetic, and reliable; references. Replies to 20/15, Office of this Paper.

DERBYSHIRE.—A reliable qualified Assistant required for small middle-class Retail business with N.H.I.; hours moderate; no holiday or Sunday duty; a permanency for the right man. Salary and recent reference to 20/34, Office of this Paper.

DURHAM COUNTY.—Qualified man wanted at end of Augnst; must be active, capable, and competent to supervise; industrial husiness; no Dispensing; easy hours; healthy locality; modern shop; salary and commission yielding £5 5s. to £6 weekly; age, height, photograph, and reference in first letter. Apply 18/25, Office of this Paper.

CLOUCESTER.—Wanted (at once), qualified Assistant (outdoors); must have had first-class Dispensing experience; hours 9 a.m. to 7 p.m. Mondays, Tuesdays, and Wednesdays, 1 p.m. Thursdays, 8 p.m. Fridays, 9 p.m. Saturdays, 6 to 8 p.m. Snudays alternately. Full particulars, with photo (to be returned), to Hampton, Northgate, Gloucester.

KENT.—Wanted, young qualified Assistant with good experience for Light Retail; salary £5 per week. Apply to "S. A." (19/40), Office of this Paper.

L EEDS.—Qualified Manager required for working-class business situate in the suburhs; liberal interest in the profits offered to the right man. Apply 22/10, Office of this Paper.

L ONDON, N.—Qualified Manager required (at once); must be energetic and thoroughly reliable. Apply personally to R. S. Hardie, Chemist, 226 Lordship Lane, Wood Green, N.

LONDON, W.—Gentlemanly Assistant required for first-class business; easy hours; good salary. Full particulars of experience to 12/32, Office of this Paper.

YNDHURST.—Qualified Manager required for good-class Retail and Dispensing; good references and all-round capability essential. Apply, with full particulars and salary required (outdoors), to Elston, New Forest Pharmacy, Lyndhurst, Hants.

NEAR MANCHESTER.—Lady Assistant required for Retail and Dispensing husiness; previous Counter experience absolutely necessary. Address, stating age, experience, salary, etc., to 22/21, Office of this Paper.

PORTSMOUTH MUNICIPAL COLLEGE.

LECTURER IN PHARMACY.

Applications are invited for the appointment of a LECTURER IN PHARMACY at the above College.

The position will comprise the course of Lecture and Lahoratory instruction suitable for candidates preparing for the Minor Examination of the Pharmaceutical Society, in Pharmacy, Materia Medica, Dispensing, and Botany.

The salary will he at the rate of £250 per annum, increasing annually by £10 to £300 per annum, and then by £25 each four years to a maximum of £400. The commencing salary in the scale will be fixed according to the candidate's qualifications and experience.

Application forms and further particulars may be obtained from the Secretary, Offices for Higher Education, Municipal College, Portsmouth, to whom the application should be returned, as early as possible, accompanied by copies of not more than three recent testimonials.

H. E. CURTIS,

11th August, 1919.

SHEFFIELD.—Qualified Manager for hranch in an industrial shopping centre; good scope for an energetic person to do well. State age, experience, and salary required, and enclose photo, to 801 Atteroliffe Road.

SOUTHSEA.—A Junior Assistant for first-class Dispensing business; short hours. Full details of experience and salary required to Barlow, 2 Palmerston Road, Southsea.

SWANSEA TECHNICAL COLLEGE.

LECTURER IN PHARMACY.

Applications are invited for the appointment of a LECTURER IN PHARMACY at the above College.

The position will comprise the course of Lecture and Lahoratory instruction suitable for candidates preparing for the Minor Examination of the Pharmaceutical Society, in Pharmacy, Materia Medioa, Dispensing and Botany.

Salary £350.

Salary £350.

Applications must reach me as early as possible.

T. J. REES, B.A,

Director of Education.

Education Offices, Dynevor Place, Swansea, 1st August, 1919.

A SSISTANT wanted, Junior or Lady, with good Dispensing Ability. Please state experience and sulary required, Amon, Chemist, 451 High Road, Streatham Common, S.W. 16.

A SSISTANT required (outdoors); age 21 to 22. Apply, stating full particulars, to Thos. Davies, M.P.S., 485 King's Road, West Chelsea, S.W. 10.

A SSISTANT wanted, lady or gentleman, qualified, in good country business near South Coast; comfortable herth; easy hours. "X. Y. Z." (21/21), Office of this Paper.

COMPETENT qualified man wanted as Assistant in high-class Dispensing, Light Retail, and Photographic husiness; hours 8.30-7, close Saturdays at 1, two hours' duty alternate Sundays. Please give full particulars of age, experience, salary (outdoors) and when disengaged, to Harold E. Matthews, Clifton, Bristol.

LVENINGS.—Part-time Assistant in first-class West-end Dispensing husiness; permanency to good man; very central. Apply (250/49), Office of this Paper.

RYPERIENCED Assistant wanted, qualified or unqualified, for quick Cash Retail; good Salesman, Window-dresser, and knowledge of Photography; progressive salary. Full particulars of age, height, experience, and salary required, to Fred. R. Smallman, 228 Soho Road, Birmingham.

EXPERIENCED Assistant wanted. Apply, giving all particulars, two last references, stating age and salary required, enclose photo, R. T. Forhes, Pharmacist and Optician, 48 Castle Street, Stockport.

CENERAL MANAGER.—Wanted, by Co-operative Society, enter prising and energetic Working Manager (qualified) for Chemist and Drug Department; capable of extension; give paticulars of experience, etc., and state salary. Co-operative Societ Ltd., Long Eaton.

JUNIOR or lady Dispenser wanted for good-class Dispensiag st Retail husiness; please give full particulars as to salsr experience, etc. Harrison, Chemist, Grayshott, Hindhead, Surre

JUNIOR Assistant (male) required; no Sunday or Baak Holide duty; good wages. Apply "Chemist," 388 Uxbridge Roa W. 12.

JUNIOR Assistant; Dispenser and capable Window-dresser; mu be able to commence by 25th August. State salary, etc., Smith, Chemist, Gosport.

JUNIOR Assistant wanted for good-class husiness (outdoors no duty Sundays or after hours; state experience, give refence, and salary required, enclosing photograph if possible Shawyer, Chemist, Swindon, Wilts.

JUNIOR or Improver wanted (early in September); good middle class family Dispensing and Photographic; two kept; or doors. Apply Harold Mitchell & Co., 56 Woodgrange Road, Fore Gate, E. 7.

LADY Assistant, about 20, chiefly for stock; shop experience, essential; state age, experience, and salary (indoors Bromley, Chemist, Whetstone, N. 20.

TADY Assistant wanted (outdoors). J. E. French, 128 High Street, Sittinghourne.

OCUM Tenens required, from September 3. Apply Barne 199 Rushey Green, Catford.

OCUM, qualified, wanted near Tunhridge Wells, for two wee from September 8th; outdoors; good-class Light Reta with N.H.I. and Photographic; state salary required, particula of experience, and age, and give a recent Retail reference. App 22/6, Office of this Paper.

Manager for small country business; short hours; no Sundduty; good house; "Viridis" (23/13), Office of this Pape

MESSRS. TIMOTHY WHITE CO., LTD., Chemists, Portsmout require a capable Pharmacist; easy hours; good and pagressive salary, with excellent prospects; free removal.

PINCH & CO., of Bath, require (immediately) Senior Dispease to commence; don't send testimonials.

PRICHARD & CONSTANCE, Haymarket, London, require Junior Assistant; he need not necessarily be qualified, must be well educated and keen to work; outdoors; hours 9 less one hour for lunch; usual holidays. Apply to Mr. T. Theakston, at 57 Haymarket, London.

QUALIFIED Branch Manager, at once; good prospects; st single man, as there is no living accommodation and houses to be let in district. T. A. Harrison, Pharmaceutic Chemist, Goodmayes, Ilford.

QUALIFIED Working Manager required for a husy Mir Retail husiness; capable, reliable, and energetic; comfo able permanent berth for the right man; state full particula experience, age, salary expected, etc., etc. Furnival & Co., Lt 3 Market Square, Hanley, Stoke-on-Trent.

QUALIFIED Assistant to manage Branch in S.E. Loadon (o doors); Cash trade and little N.H.I.; easy business. Stage, experience, and salary required to 23/19, Office of this Psp

PELIABLE Assistant, qualified or unqualified; knowledge French an advantage; reasonable hours and good ssl offered to right man. Apply, with full particulars, to 80 c/o Mather & Crowther, Ltd., 10/13 New Bridge Street, E.C. 4

REQUIRED. qualified Dispenser (male) for ahout six wee hours 9.30 to 5; lunch and tea provided; used to Hospi work. Applications to the Secretary, Queen Mary's Hospital the East End, Stratford, E. 15.

REQUIRED, qualified man (at once) in good-class busine N.H.I. Dispensing; permanency; state age, salary required and experience; suit middle-aged man. Boulton & Skelton, Lo

SHORTHAND Typist (Lady) required; thoroughly experien and capable; good salary; hours 9-5.30, 1 o'clock Saturda Apply or write Parke's Drug Stores, Ltd., 65 Hsrmood Str. N.W. 1.

SURGICAL Instruments, Appliances, etc.—Wanted, good counter Assistant with sound knowledge of first-class bness; excellent permanent opportunity; interview invited; speciations in confidence. "Jerome" (17/7), Office of this Paper.

UNQUALIFIED Assistant; accustomed to good-class Ret Dispensing, and Photography; please state age, salary quired, and full particulars as to experience. Hutton & Berr Ltd., 16 The Parade, Leamington Spa.

UNQUALIFIED Assistant wanted (at once); must be good penser; ex-service man proferred. State experience salary required (outdoors) to Long & Strickland, 21 High Str Bognor, Sussex.

QUALIFIED; Junior Assistant; outdoors; hours 8.30 to 7; no Sunday or night duty; pleasant neighbourhood. Please age, height, salury, and references, Cooling & Son, Edene, Kent.

WANTED, qualified Manager, age 35-45, for Drug and Patent Medicine Department of high-class Retail Store in Liverpool; must be an efficient Buyer; state experience and salary required. Apply 14/32, Office of this Paper.

ANTED, lady Dispenser, Bookkeeper (end of September), by Doctor in Midlands; salary £2 2s. per week, live out; day evening off. Reply, stating age, experience, etc., 18/9, of this Paper.

ANTED (immediately), male Dispenser for Doctor in colliery district; must be experienced and able to undertake nas; outdoors. Apply, stating experience, references, and required, to "Dispenser," c/o Reynolds & Branson, Ltd.,

NTED, Assistant (outdoors); good Counterman and reliable. Reply, stating full particulars and salary required, to L. 1 on, Pharmaceutical Chemist, Scaford, Sussex.

NTED, Assistant (unqualified) for quick Cash business; asy hours; no Sunday duty; close Thursdays 1 o'clock, with full particulars, enclosing photo, if possible, to s, Chemists, Grimsby.

NTED, early in September, a Male Assistant (outdoors); just be a reliable Dispenser and have a good general dge of his business. Apply, stating previous experience lary required, to W. J. Boyes, 61 Balham Hill, London, 2.

NTED (at once) a qualified Manager for Branch Shop at lossley, near Manchester; good wages and easy hours. Apply a Chemist, Golcar, near Huddersfield.

NTED, for good-class country business, easy hours, healthy inroundings, commencing salary £200, competent Managing int; knowledge of Optics and Dentistry advantageous; perancy. Apply, with full particulars, 22/12, Office of this Paper.

WHOLESALE.

48. , for 50 words or less; 6d. for every additional 10 words or less, prepaid.

CHESTER.—Unqualified Assistant wanted, with experience putting up Drug and Chemical orders. State in full age, elee, and salary expected, Mottershead & Co., 7 Exchange el Manchester.

Neportunity occurs for a smart gentleman capable of taking large of works to join the directorate of a progressive firm dufacturing Chemists. Replies, giving fullest particulars cadence) to "Midlands" (251/100), Office of this Paper.

SSTANT Packers (female) required. Apply R. Ansay, 44 ilson Street, E.C.

K required for Buyers' Office of provincial Wholesale Drugst; must have knowledge of Drugs, Chemicals, and Patent dies. Apply, stating age, previous experience, and salary aul, to "Ajax" (249/36), Office of this Paper.

R: TRADE.—Tablet Maker required; must thoroughly undernnd Tablet Making and Coating, including Granulating, to://est of England; permanency and good prospects; free emo; please mention age, experience, references, salary

RIENCED Representatives required; good, permanent posins for reliable men possessing an established clientele mong Doctors and Pharmacists. The following territories are vila: (1) Midlands, (2) Border Counties, (3) Home Counties, Shern Counties, (5) Western Counties. These areas have temperature of the property of th

IENCED Man required to take charge of Chemical and ag stock of Wholesale house; qualified preferred. Write, tain full particulars, to 250/740, Office of this Paper.

aR? firm of Manufacturing Chemists require the services of alytical Chemist; must possess Major qualifications and of bacteriology and acquaintance with Galenical assay pply 250/74, Office of this Paper.

LITERARY.—Wanted, in Literary Department of large London Wholesale firm, qualified men with abinty to write leaflets, booklets, etc.; advertising experience not essential but an advantage; specimens of work will be required at or before interview. State age, salary, and experience to 249/20, Office of this Paper.

PACKER (woman) for light work; one accustomed to packing Chemists' general requirements. Apply Cooper, Son & Co., Ltd., 80 Gloucester Road, S.W.

PROGRESSIVE Manchester firm of Toilet Goods Manufacturers and Heirdressers' Sundriesmen require Representative; salary, expenses, and commission; established connection in Lancashire, Clesame, 'Yorkshire; preference to applicant who oan extend this connection in Midiands or South wates; permanency to energetic and reliable man; state fully age, experience, present and previous engagements, salary, references, and when at liberty. Apply 23/9, Office of this Paper.

REQUIRED by Wholesale City firm, smart young man (not over 55) to supervise dispatch of orders; must be able to check prices and have a knowledge of Chemists' Sundries; good prospects for energetic young man. Apply in writing, stating age and full particulars and salary required, to Manager, 69 Carter Lane, E.C. 4.

REQUIRED by London house, young energetic Man, for putting over and despatching Lozenges, Tablets, etc.; good prospects to suitable applicant. Write in first instance, giving full particulars, in confidence, as to age, experience, and salary required, to "Lozenges" (21/15), Office of this Paper.

PEQUIRED in the Order department of a firm of Wholesale Chemists and Druggists, a young man who can read and readily understand varied Drug Orders; must be a good, clear writer and accurate in his work. Applications in own handwriting, stating age, experience, and salary, to F. L. D., Alen & Hanburys, Ltd., Bethnal Green, E. 2.

TRAVELLER wanted by Scotch firm with established connection amongst best class Chemists in London; very liberal commission; splendid opportunity for the right man; references desired. Apply 20/16, Office of this Paper.

TRAVELLERS wanted.—A firm of Manufacturing Chemists, with complete range of Toilet Specialities, require the services of smart Representatives to call upon Chemists, Hairdressers, Stores, etc.; small salary and commission. State territory covered and full particulars (in confidence) to 251/101, Office of this Paper.

WANTED, by London Sundries and Dressings House, Traveller for Eastern Countries; may hold other non-competitive Agency. Apply to "Listerism" (247/20), Office of this Paper.

WANTED, in the provinces, a Forewoman to take complete charge of a Wholesale Chemists' and Druggists' Packed Goods Department in which '40 girls and women are employed; applicants must have had similar experience and be able to control. State age, experience, and wages required, to "Packed Goods" (248/39), Office of this Paper.

WANTED, qualified Assistant for semi-Wholesale; age not objected to; hours 9-6, Saturdays 1 o'clock. Apply, letter only, "J. M. B.," 33 Mortimer Street, London, W. 1.

SITUATIONS OPEN.

4s. 6d. for 50 words or less; 6d, for every additional 10 words or less, prepaid.

(Colonial, Indian and Foreign.)

A USTRALIA.—Large firm of Manufacturing Chemists require experienced Sugar Coater; liberal terms and good prospects to suitable man. Write, giving full particulars, to 246/50, Office of this Paper.

BOULOGNE S/MER.—Young, energetic, well-educated Assistant required (immediately) in busy International Pharmacy; duties include Dispensing, preparation of Galenicals, and Counter work; opportunity to learn French; state age, when free, and salary required. S. Balch, 49 Rue Thiers.

PEDERATED MALAY STATES.—Qualified Assistant; unmarried; must have had good experience in retail; terms three years' agreement; salary 350, 400, 450 pounds sterling per annum; passage paid second class out and home; short hours; good climate; the firm one of the largest in the East; and the position and surrounding country most attractive. Apply Dakin Brothers, Ltd., 82 Middlesex Street, E. 1.

HONG KONG.—Wanted (immediately), qualified Chemist's Assistant; principally Light Retail and able to take charge if necessary; good salary and terms offered. Apply Durant, Radford & Co., Ltd., Billiter Buildings, E.C.

INDIA.—Pharmacist required by Pharmaceutical Manufacturing House as Representative in India; age not over 25; salary and expenses; good opportunity for ambitious man. Apply 246/500, Office of this Paper.

HONG KONG.—Two thoroughly reliable Assistants, who have had good experience in first-class Itetail business; age 22 to 30; four or five years' agreement; saiary for qualified men £500, rising to £550 per annum; passage paid out and home. Address "Export" (22/9), Office of this Paper.

RHODESIA.—Qualified Assistant for a high-class business in the principal town; olimate healthy, conditions favourable; passage paid out; particularly suitable for young unmarried man desirous of settling amongst promising surroundings in a rising British Colony. Apply by letter to Lennon, 14 Lafone Street, London, S.E. 1.

SINGAPORE.—Wanted, qualified Assistant, young, single, of good experience; healthy climate; short hours; three years' agreement; passage out and home; sayary first year £38 monthly, second year £40 15s. third year £43 15s. Full particulars from M. K. Watt, Pharmacist, 28 Esslemont Avenue, Aberdeen.

SINGAPORE.—Wanted, fully qualified Assistant for Wholesale and Retail Pharmaceutical Chemists' Store. State salary required and full particulars to Durant, Radford & Co., Ltd., Billiter Buildings, E.C.

SINGAPORE.—Wanted, fully-qualified and competent man to manage Wholesale and Retail Pharmaceutical Chemist's Store. State satary required and full particulars to Durant, Radford & Co., Ltd., Billiter Buildings, E.C.

SITUATIONS WANTED,

is, for 12 words or less; 6d, for every additional 10 words or less, prepaid.

fricate.)

RETAIL.

A THOROUGHLY reliable young Pharmacist desires permanency, Manager or Assistant; married; last situation five years. Salary and particulars to "Systema," 4 Southwiew Road,

A DVERTISER requires position as Assistant; good practical experience; small salary accepted with view to quality; London North preferred. Swann, 4 Crescent Road, West Green, N. 15.

A DVERTISER requires post as Junior to obtain experience and revision in Dispensing after military service. Apply 18/4, Omce of this Paper.

A DVERTISER, now disengaged, requires engagement as Locum; 45; thoroughly experienced Counter or Dispensing. 14 Barnard Road, S.W. 11.

A DVERTISER seeks berth (London area), with residence; own furniture; part time preferred. Apply 21/35, Office of this

A PPRENTICE (lady); part Hall qualification; twelve months' Business experience. 21/23, Office of this Paper.

A^S qualified Manager; disengaged; 20 years' experience London and provincial; permanency; South Wales preferred. Davics, 2 Berwick Road, Bynea, Llanelly.

A S Locum; permanency; London, provinces; excellent references; exceptional experience; disengaged. "Chemist," 23a Sinclair Gardens, Kensington, W. 14.

 ${
m A^{8}\ Locum\ (unqualified);}\ {
m take\ charge;}\ {
m disengaged;}\ {
m terms}$ moderate, "Locum," 2 Christian Road, Preston.

As Manager or Locum; qualified; experienced; well recomended; disengaged. Apply 22/20, Office of this Paper.

As Manager; qualified; disengaged; permanency required immediately; non-residential post only considered; fully experienced; good salary essential; state best offer. Apply 22/4, Office of this Paper.

A SSISTANT; unqualified; experienced all branches; capable of taking charge or manage branch; references, etc.; disengaged. "Statim," 662 Stratford Road, Birmingham.

A SSISTANT or Manager; qualified; 28; experienced, reliable; permanency. Apply 19/30, Office of this Paper.

A SSISTANT (25), disengaged, unqualified, five years' experience Wholesale Laboratory, desires change; Retail Counter experience, London. Apply 17/14, Office of this Paper.

A SSISTANT or Manager; qualified; outdoors; experienced, capable, and trustworthy; London preferred; free September. Particulars, salary, etc., 23/18, Office of this Paper.

A SSISTANT; unqualified; able to manage; middle age; thoroughly experienced; good references; permanency desired; country preferred. Apply 21/36, Office of this Paper.

A SSISTANT, 30, seeks engagement; nine years' experience good-class Retail Dispensing and Photographic business; capable of taking charge; disengaged; N.W. district or City preferred. "4.," 13 Oval Road, Regent's Park, N.W. 1.

A SSISTANT or Locum; unqualified; good and varied experience London preferred; discagaged shortly; personal interview desired. Apply "E. D." (24/11), Office of this Paper.

BLACKPOOL or DISTRICT.—Experienced Assistant (unqual fied); temporary or permanent. Oliver, 2 Christinn Rom Preston.

BRISTOL.—Qualified (Minor) requires evening employment, Di pensing or Laboratory, while studying for Major. App 21/28, Office of this Paper.

CITY.—Chemist, 35, seeks situation in good brisk business a Partner, Manager, or Senior; previous City experience Reply 20/24, Office of this Paper.

CLERICAL work of any kind, evenings or day time. "F. G." (279/39), Office of this Paper.

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D.B.O.A., aged 33 years, married, requires Managership, with view to succession preferred; six years present situation; living accommodation essential. y offered, hours, etc., to "Retinoscope" (20/30), Office of

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NAGER (Branch); experienced as such; married; 38; Hall qualification; excellent references, including London; present over 4 years; could wait, if desired. Apply "Reliable" 251), Office of this Paper,

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NAGERSHIP (Branch); qualified; where Assistant is also kept; London suburbs or provincial town near London; out preferred; moderate hours; age 56; present position 5 years; dis gaged end of September. Apply 22/13, Office of this Paper.

NOR Student (young lady, tall) desires part-time with Chemist; near Victoria preferred; some training. Write Denser," 36 Charlwood Street, S.W. 1.

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QUALIFIED, demobilised, 25, abstainer, seeks position in London; excellent reterences and experience; disengaged in a week's time. Please reply to "H.," 228 Christehurch Road, Boscombe, Bournemouth.

QUALIFIED Manager desires responsible position; 42; well recommended; Optics, Dentistry, Photographic; good Preserber and business-builder; disengaged shortly; Locum or permanency. Apply, with terms, to "Refractionist," c/o Mr. Camplin, Chemist, Horsham.

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UNQUALIFIED, recently demobilised, 25, good Dispenser, Salesman, desires season engagement, or would do Locum; disengaged. State salary, G. M. Cook, 17 Victoria Street, Norwich.

WANTED, situation as Assistant; age 34; near training centre; West of England preferred; married, three children; allround experience; six years' present situation; live over or house required; desiring to qualify; view to purchase later if required. Apply 18/8, Office of this Paper.

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"PHARMACEUTICAL Journal," 1900-1916; also C. & Ist period; Year-Book Pharmacy, P.J.F., 1907. Adan, 72 w Street, Aberdeen.

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1st August, 1919

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